

Edward Bryan Coughlin

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/988395/publications.pdf>

Version: 2024-02-01

100
papers

5,467
citations

94433

37
h-index

79698

73
g-index

102
all docs

102
docs citations

102
times ranked

6271
citing authors

#	ARTICLE	IF	CITATIONS
1	Alkaline Stability Evaluation of Polymerizable Hexyl- π -Ethered Ammonium Cations. <i>Macromolecular Rapid Communications</i> , 2022, 43, e2100610.	3.9	7
2	Enhancing desalination performance by manipulating block ratios in a polyethylene-based triblock copolymer anion exchange membrane for electrodialysis. <i>Journal of Membrane Science</i> , 2022, 647, 120295.	8.2	9
3	Visualization of Polymer Dynamics in Cellulose Nanocrystal Matrices Using Fluorescence Lifetime Measurements. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 10793-10804.	8.0	3
4	Evaluating the effect of ionomer chemical composition in silver-ionomer catalyst inks toward the oxygen evolution reaction by half-cell measurements and water electrolysis. <i>Electrochimica Acta</i> , 2022, 412, 140124.	5.2	5
5	Topological Frustration as a New Parameter to Tune Morphology Revealed through Exploring the Continuum between A-B-C 3-Arm Star and Linear Triblock Polymers. <i>Macromolecules</i> , 2021, 54, 4401-4411.	4.8	2
6	(Invited) Tuning Triblock Co-Polymer Silver Interactions on the Nanoscale to Enhance Transport in Electrodes for Electrochemical Devices Based on Anion Exchange Membranes. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 1915-1915.	0.0	0
7	Electrospinning Fibers from Oligomeric Complex Coacervates: No Chain Entanglements Needed. <i>Macromolecules</i> , 2021, 54, 5033-5042.	4.8	14
8	Designing Anion-Exchange Ionomers with Oriented Nanoscale Phase Separation at a Silver Interface. <i>Journal of Physical Chemistry C</i> , 2021, 125, 20592-20605.	3.1	3
9	Maximizing the Oxygen Evolution Reaction by Optimizing Ionomer Structure in Anion Exchange Membrane Electrolysis. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 1241-1241.	0.0	0
10	Melt Mastication of Isotactic Polypropylene for Improved Thermal and Physical Properties. <i>Polymer Engineering and Science</i> , 2020, 60, 380-386.	3.1	1
11	Investigating Silver Nanoparticle Interactions with Quaternary Ammonium Functionalized Triblock Copolymers and Their Effect on Midblock Crystallinity. <i>ACS Applied Polymer Materials</i> , 2020, 2, 4914-4923.	4.4	5
12	Assembly of Disordered Cocontinuous Morphologies by Multiblock Copolymers with Random Block Sequence and Length Dispersity. <i>ACS Applied Polymer Materials</i> , 2020, 2, 3282-3290.	4.4	7
13	Optimization of anionic conductivity through the coexistence of ionomer cluster and backbone-backbone morphologies in anion exchange membranes. <i>Journal of Polymer Science</i> , 2020, 58, 3446-3455.	3.8	3
14	A Polyethylene-Based Triblock Copolymer Anion Exchange Membrane with High Conductivity and Practical Mechanical Properties. <i>ACS Applied Polymer Materials</i> , 2020, 2, 1294-1303.	4.4	48
15	Insights into the Water Transport Mechanism in Polymeric Membranes from Neutron Scattering. <i>Macromolecules</i> , 2020, 53, 1443-1450.	4.8	30
16	Ring-opening metathesis polymerization of cobaltocenium derivative to prepare anion exchange membrane with high ionic conductivity. <i>Polyhedron</i> , 2020, 181, 114462.	2.2	14
17	Modifying the Structure and Dynamics of Ionomers through Counterion Sterics. <i>Macromolecules</i> , 2020, 53, 1767-1776.	4.8	22
18	Phosphonium-Containing Block Copolymer Anion Exchange Membranes: Effect of Quaternization Level on Bulk and Surface Morphologies at Hydrated and Dehydrated States. <i>Macromolecules</i> , 2019, 52, 6097-6106.	4.8	21

#	ARTICLE	IF	CITATIONS
19	Functionalized Polybutadiene for Clay-Polymer Nanocomposite Fabrication. <i>Macromolecules</i> , 2019, 52, 6135-6141.	4.8	13
20	Pendant side-chain sterics against electrostatic forces: Influencing short-range ordering in random polyelectrolytes. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2019, 57, 1325-1336.	2.1	2
21	Effect of Surface Alignment on Connectivity in Phosphonium-Containing Diblock Copolymer Anion-Exchange Membranes. <i>Journal of Physical Chemistry C</i> , 2019, 123, 30819-30826.	3.1	11
22	Crosslinked anion exchange membranes with connected cations. <i>Journal of Polymer Science Part A</i> , 2018, 56, 618-625.	2.3	9
23	Tuning microdomain spacing with light using ortho-nitrobenzyl-linked triblock copolymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2018, 56, 355-361.	2.1	5
24	Interplay Between Hydroxyl Density and Relaxations in Poly(vinylbenzyltrimethylammonium)-poly(methylbutylene) Membranes for Electrochemical Applications. <i>Journal of the American Chemical Society</i> , 2018, 140, 1372-1384.	13.7	21
25	Thin, robust, and chemically stable photo-cross-linked anion exchange membranes based on a polychlorostyrene-b-polycyclooctene-b-polychlorostyrene ABA triblock polymer. <i>Solid State Ionics</i> , 2018, 316, 135-142.	2.7	14
26	Progression of the Morphology in Random Ionomers Containing Bulky Ammonium Counterions. <i>Macromolecules</i> , 2018, 51, 7377-7385.	4.8	9
27	Using block copolymer architecture to achieve sub-10 nm periods. <i>Polymer</i> , 2017, 121, 297-303.	3.8	37
28	Ion transport properties of mechanically stable symmetric ABCBA pentablock copolymers with quaternary ammonium functionalized midblock. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2017, 55, 612-622.	2.1	21
29	Systematic Fluorination of P3HT: Synthesis of P(3HT-co-3H4FT)s by Direct Arylation Polymerization, Characterization, and Device Performance in OPVs. <i>Macromolecules</i> , 2016, 49, 3028-3037.	4.8	32
30	Peptide-Directed PdAu Nanoscale Surface Segregation: Toward Controlled Bimetallic Architecture for Catalytic Materials. <i>ACS Nano</i> , 2016, 10, 8645-8659.	14.6	58
31	Achieving Continuous Anion Transport Domains Using Block Copolymers Containing Phosphonium Cations. <i>Macromolecules</i> , 2016, 49, 4714-4722.	4.8	60
32	Photo-Cross-Linked Anion Exchange Membranes with Improved Water Management and Conductivity. <i>Macromolecules</i> , 2016, 49, 153-161.	4.8	68
33	Water uptake profile in a model ion-exchange membrane: Conditions for water-rich channels. <i>Journal of Chemical Physics</i> , 2015, 142, 114906.	3.0	15
34	Directed Self-Assembly of Poly(2-vinylpyridine)-polystyrene-poly(2-vinylpyridine) Triblock Copolymer with Sub-15 nm Spacing Line Patterns Using a Nanoimprinted Photoresist Template. <i>Advanced Materials</i> , 2015, 27, 4364-4370.	21.0	51
35	Mechanical Performance of Polyisoprene Copolymer Anion Exchange Membranes by Varying Crosslinking Methods. <i>Journal of the Electrochemical Society</i> , 2015, 162, H206-H212.	2.9	9
36	Thermally Cross-Linked Anion Exchange Membranes from Solvent Processable Isoprene Containing Ionomers. <i>Macromolecules</i> , 2015, 48, 655-662.	4.8	61

#	ARTICLE	IF	CITATIONS
37	Permethyl Cobaltocenium (Cp* ₂ Co ⁺) as an Ultra-Stable Cation for Polymer Hydroxide-Exchange Membranes. <i>Scientific Reports</i> , 2015, 5, 11668.	3.3	111
38	Dinonylphenyl end-capped poly(ethylene glycol)-b-polystyrene: synthesis and its unusual crystalline and self-assembly behaviors. <i>Journal of Materials Science</i> , 2015, 50, 4280-4287.	3.7	1
39	Interplay between solid state transitions, conductivity mechanisms, and electrical relaxations in a [PVBtMA] [Br]-b-PMB diblock copolymer membrane for electrochemical applications. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 31125-31139.	2.8	29
40	Systematic Variation of Fluorinated Diketopyrrolopyrrole Low Bandgap Conjugated Polymers: Synthesis by Direct Arylation Polymerization and Characterization and Performance in Organic Photovoltaics and Organic Field-Effect Transistors. <i>Macromolecules</i> , 2015, 48, 6978-6986.	4.8	46
41	Effect of Pendant Functionality in Thieno[3,4- <i>b</i>]thiophene-benzodithiophene Polymers for OPVs. <i>Chemistry of Materials</i> , 2015, 27, 443-449.	6.7	22
42	Maintaining Structural Stability of Poly(lactic acid): Effects of Multifunctional Epoxy based Reactive Oligomers. <i>Polymers</i> , 2014, 6, 1232-1250.	4.5	35
43	Effects of Molecular Architecture on the Stereocomplex Crystallization in Poly(lactic acid) Blends. <i>Macromolecular Chemistry and Physics</i> , 2014, 215, 320-326.	2.2	7
44	Preparation and characterization of Pt/Pt:CeO ₂ nanorod catalysts for short chain alcohol electrooxidation in alkaline media. <i>RSC Advances</i> , 2014, 4, 33489-33496.	3.6	17
45	Stereocomplex Formation in Polylactide Multiarm Stars and Comb Copolymers with Linear and Hyperbranched Multifunctional PEG. <i>Macromolecular Chemistry and Physics</i> , 2013, 214, 1434-1444.	2.2	30
46	Synthesis of photocleavable poly(methyl methacrylate-block-lactide) via atom-transfer radical polymerization and ring-opening polymerization. <i>Journal of Polymer Science Part A</i> , 2013, 51, 4309-4316.	2.3	18
47	Synthesis of Semicrystalline/Fluorinated Side-Chain Crystalline Block Copolymers and Their Bulk and Thin Film Nanoordering. <i>Macromolecules</i> , 2013, 46, 3737-3745.	4.8	24
48	Photocleavable Triblock Copolymers Featuring an Activated Ester Middle Block: One-Step Synthesis and Application as Locally Reactive Nanoporous Thin Films. <i>ACS Macro Letters</i> , 2013, 2, 966-969.	4.8	31
49	Thieno[3,4- <i>b</i>]thiophene Acceptors with Alkyl, Aryl, Perfluoroalkyl, and Perfluorophenyl Pendants for Donor-Acceptor Low Bandgap Polymers. <i>Macromolecules</i> , 2013, 46, 8873-8881.	4.8	46
50	Synthesis and structure-conductivity relationship of polystyrene-block-poly(vinyl benzyl) Part B: <i>Polymer Physics</i> , 2013, 51, 1751-1760.	2.1	75
51	Anion exchange membranes: Current status and moving forward. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 1727-1735.	2.1	367
52	Physicochemical properties of 1,2,3-triazolium ionic liquids. <i>RSC Advances</i> , 2012, 2, 848-853.	3.6	65
53	Effect of midblock on the morphology and properties of blends of ABA triblock copolymers of PDLA-mid-block-PDLA with PLLA. <i>Polymer</i> , 2012, 53, 3008-3016.	3.8	53
54	Block Copolymers Containing Quaternary Benzyl Ammonium Cations for Alkaline Anion Exchange Membrane Fuel Cells (AAEMFC). <i>ACS Symposium Series</i> , 2012, , 253-265.	0.5	2

#	ARTICLE	IF	CITATIONS
55	<i>p</i> -Nitrobenzyl Alcohol Derivatives: Opportunities in Polymer and Materials Science. <i>Macromolecules</i> , 2012, 45, 1723-1736.	4.8	480
56	Silsesquioxanes: Recent Advancement and Novel Applications. <i>International Journal of Polymer Science</i> , 2012, 2012, 1-2.	2.7	11
57	Nonconventional Elements in Block Copolymers. <i>ACS Symposium Series</i> , 2011, , 53-70.	0.5	3
58	Highly Ordered Nanoporous Thin Films from Photocleavable Block Copolymers. <i>Macromolecules</i> , 2011, 44, 6433-6440.	4.8	97
59	Polymers and Copolymers Containing Covalently Bonded Polyhedral Oligomeric Silsesquioxanes Moieties. <i>Advances in Silicon Science</i> , 2011, , 167-207.	0.6	7
60	Utilization of Oligo(lactic acid) for Studies of Chain Conformation and Chain Packing in Poly(lactic acid) Block Copolymers. <i>Macromolecules</i> , 2011, 44, 9040-9045.	4.8	25
61	Influence of Chain Stiffness on Thermal and Mechanical Properties of Polymer Thin Films. <i>Macromolecules</i> , 2011, 44, 9040-9045.	4.8	77
62	Toughening semicrystalline poly(lactic acid) by morphology alteration. <i>Polymer</i> , 2011, 52, 4184-4188.	3.8	63
63	Synthesis and photophysical properties of soluble low-bandgap thienothiophene polymers with various alkyl side-chain lengths. <i>Journal of Polymer Science Part A</i> , 2011, 49, 3260-3271.	2.3	18
64	Inorganic-Organic Hybrid Copolymers derived from Silsesquioxanes or Carborane Building Blocks. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1312, 1.	0.1	0
65	Hybrid inorganic-organic proton exchange membranes containing 1H-1,2,3-triazole moieties. <i>Solid State Ionics</i> , 2010, 181, 1183-1188.	2.7	25
66	Ring-opening metathesis copolymerization of cyclooctene and a carborane-containing oxanorbornene. <i>Journal of Polymer Science Part A</i> , 2010, 48, 2557-2563.	2.3	17
67	Proton conducting polymers containing 1H-1,2,3-triazole moieties. <i>Journal of Polymer Science Part A</i> , 2009, 47, 188-196.	2.3	32
68	Thermal degradation of deoxybenzoin polymers studied by pyrolysis-gas chromatography/mass spectrometry. <i>Polymer Degradation and Stability</i> , 2008, 93, 1059-1066.	5.8	37
69	Antibacterial and Hemolytic Activities of Quaternary Pyridinium Functionalized Polynorbornenes. <i>Macromolecular Chemistry and Physics</i> , 2008, 209, 516-524.	2.2	134
70	Ethylene-Propylene-Silsesquioxane Thermoplastic Elastomers. <i>Macromolecular Chemistry and Physics</i> , 2008, 209, 1198-1209.	2.2	52
71	Fluoroelastomer Copolymers Incorporating Polyhedral Oligomeric Silsesquioxane. <i>Macromolecular Chemistry and Physics</i> , 2008, 209, 2040-2048.	2.2	22
72	Amphiphilic Carborane-Containing Diblock Copolymers. <i>Macromolecules</i> , 2007, 40, 5628-5630.	4.8	32

#	ARTICLE	IF	CITATIONS
73	Water-Free Proton-Conducting Polysiloxanes: A Study on the Effect of Heterocycle Structure. <i>Macromolecules</i> , 2007, 40, 8708-8713.	4.8	62
74	Intrinsically conducting polymers and copolymers containing triazole moieties. <i>Solid State Ionics</i> , 2007, 178, 1398-1403.	2.7	64
75	Poly(arylate- ϵ -phosphonate) copolymers with deoxybenzoin in the backbone: Synthesis, characterization, and thermal properties. <i>Journal of Polymer Science Part A</i> , 2007, 45, 4573-4580.	2.3	39
76	Amphiphilic Polymers with Potent Antibacterial Activity. <i>ACS Symposium Series</i> , 2007, , 175-197.	0.5	7
77	Scission of Diblock Copolymers into Their Constituent Blocks. <i>Macromolecules</i> , 2006, 39, 1670-1672.	4.8	43
78	Kinetic Modeling of the Effect of MAO/Zr Ratio and Chain Transfer to Aluminum in Zirconocene Catalyzed Propylene Polymerization. <i>Macromolecules</i> , 2006, 39, 4306-4316.	4.8	27
79	Deoxybenzoin-Based Polyarylates as Halogen-Free Fire-Resistant Polymers. <i>Macromolecules</i> , 2006, 39, 3553-3558.	4.8	96
80	Synthesis and Characterization of Halogen-Free Antiflammable Polyphosphonates Containing 4,4'-Bishydroxydeoxybenzoin. <i>Macromolecules</i> , 2006, 39, 5974-5975.	4.8	80
81	Origin of the formation of the 4-butenyl end group in zirconocene-catalyzed propylene polymerization. <i>Journal of Polymer Science Part A</i> , 2006, 44, 3724-3728.	2.3	8
82	Kinetic modeling of slurry propylene polymerization using $\text{rac-ET(Ind)}_2\text{ZrCl}_2/\text{MAO}$. <i>AIChE Journal</i> , 2006, 52, 1824-1835.	3.6	22
83	Copolymerizations of ethylene and α -olefins with supported piano-stool catalysts. <i>Polyhedron</i> , 2005, 24, 1347-1355.	2.2	10
84	Selective nitrogen protection of hydroxyalkylbenzimidazoles using 2,2,2-trichloroethylchloroformate. <i>Tetrahedron Letters</i> , 2005, 46, 6311-6313.	1.4	5
85	Isotactic Poly(propylene) Crystallization: Role of Small Fractions of High or Low Molecular Weight Polymer. <i>Macromolecular Chemistry and Physics</i> , 2005, 206, 125-134.	2.2	22
86	Hemi-Telechelic Polystyrene-POSS Copolymers as Model Systems for the Study of Well-Defined Inorganic/Organic Hybrid Materials. <i>Macromolecules</i> , 2004, 37, 5123-5126.	4.8	97
87	Modular Norbornene Derivatives for the Preparation of Well-Defined Amphiphilic Polymers: A Study of the Lipid Membrane Disruption Activities. <i>Macromolecules</i> , 2004, 37, 694-700.	4.8	54
88	Tuning the Hemolytic and Antibacterial Activities of Amphiphilic Polynorbornene Derivatives. <i>Journal of the American Chemical Society</i> , 2004, 126, 15870-15875.	13.7	443
89	Morphological and Mechanical Evaluation of Hybrid Organic-Inorganic Thermoset Copolymers of Dicyclopentadiene and Mono- or Tris(norbornenyl)-Substituted Polyhedral Oligomeric Silsesquioxanes. <i>Macromolecules</i> , 2004, 37, 1276-1282.	4.8	109
90	Polymer Nanocomposites through Controlled Self-Assembly of Cubic Silsesquioxane Scaffolds. <i>Macromolecules</i> , 2004, 37, 8606-8611.	4.8	191

#	ARTICLE	IF	CITATIONS
91	Ultrasonic spectroscopic evaluation of the ring-opening metathesis polymerization of dicyclopentadiene. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2003, 41, 1323-1333.	2.1	12
92	Linear or Branched Polyethylenes from Supported Aryloxytitanium(IV)-Cyclopentadienyl Complexes. <i>Macromolecules</i> , 2003, 36, 6300-6304.	4.8	9
93	Gas Manifold for Olefin Polymerization and a Convenient Reactor Design for the Parallel Screening of Catalysts. <i>Macromolecules</i> , 2002, 35, 9613-9616.	4.8	11
94	Alternating Copolymerizations of Polar and Nonpolar Cyclic Olefins by Ring-Opening Metathesis Polymerization. <i>Macromolecules</i> , 2002, 35, 54-58.	4.8	74
95	X-ray Characterizations of Polyethylene Polyhedral Oligomeric Silsesquioxane Copolymers. <i>Macromolecules</i> , 2002, 35, 2375-2379.	4.8	266
96	Nanostructured Polyethylene-POSS Copolymers: Control of Crystallization and Aggregation. <i>Nano Letters</i> , 2002, 2, 1149-1155.	9.1	176
97	Chemically Cross-Linked Polycyclooctene: Synthesis, Characterization, and Shape Memory Behavior. <i>Macromolecules</i> , 2002, 35, 9868-9874.	4.8	257
98	Synthesis and thermal properties of hybrid copolymers of syndiotactic polystyrene and polyhedral oligomeric silsesquioxane. <i>Journal of Polymer Science Part A</i> , 2002, 40, 885-891.	2.3	107
99	Novel Polyolefin Nanocomposites: Synthesis and Characterizations of Metallocene-Catalyzed Polyolefin Polyhedral Oligomeric Silsesquioxane Copolymers. <i>Macromolecules</i> , 2001, 34, 8034-8039.	4.8	273
100	Synthesis of polyethylene hybrid copolymers containing polyhedral oligomeric silsesquioxane prepared with ring-opening metathesis copolymerization. <i>Journal of Polymer Science Part A</i> , 2001, 39, 2920-2928.	2.3	97