Edward Bryan Coughlin

List of Publications by Year
in descending order

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100	5,467	94433 37	79698 73
papers	citations	h-index	g-index

102	102	102	6271
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	o-Nitrobenzyl Alcohol Derivatives: Opportunities in Polymer and Materials Science. Macromolecules, 2012, 45, 1723-1736.	4.8	480
2	Tuning the Hemolytic and Antibacterial Activities of Amphiphilic Polynorbornene Derivatives. Journal of the American Chemical Society, 2004, 126, 15870-15875.	13.7	443
3	Anion exchange membranes: Current status and moving forward. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1727-1735.	2.1	367
4	Novel Polyolefin Nanocomposites:Â Synthesis and Characterizations of Metallocene-Catalyzed Polyolefin Polyhedral Oligomeric Silsesquioxane Copolymers. Macromolecules, 2001, 34, 8034-8039.	4.8	273
5	X-ray Characterizations of Polyethylene Polyhedral Oligomeric Silsesquioxane Copolymers. Macromolecules, 2002, 35, 2375-2379.	4.8	266
6	Chemically Cross-Linked Polycyclooctene:Â Synthesis, Characterization, and Shape Memory Behavior. Macromolecules, 2002, 35, 9868-9874.	4.8	257
7	Polymer Nanocomposites through Controlled Self-Assembly of Cubic Silsesquioxane Scaffolds. Macromolecules, 2004, 37, 8606-8611.	4.8	191
8	Nanostructured Polyethylene-POSS Copolymers:â€‰ Control of Crystallization and Aggregation. Nano Letters, 2002, 2, 1149-1155.	9.1	176
9	Antibacterial and Hemolytic Activities of Quaternary Pyridinium Functionalized Polynorbornenes. Macromolecular Chemistry and Physics, 2008, 209, 516-524.	2.2	134
10	Permethyl Cobaltocenium (Cp*2Co+) as an Ultra-Stable Cation for Polymer Hydroxide-Exchange Membranes. Scientific Reports, 2015, 5, 11668.	3.3	111
11	Morphological and Mechanical Evaluation of Hybrid Organicâ^'Inorganic Thermoset Copolymers of Dicyclopentadiene and Mono- or Tris(norbornenyl)-Substituted Polyhedral Oligomeric Silsesquioxanes. Macromolecules, 2004, 37, 1276-1282.	4.8	109
12	Synthesis and thermal properties of hybrid copolymers of syndiotactic polystyrene and polyhedral oligomeric silsesquioxane. Journal of Polymer Science Part A, 2002, 40, 885-891.	2.3	107
13	Synthesis of polyethylene hybrid copolymers containing polyhedral oligomeric silsesquioxane prepared with ring-opening metathesis copolymerization. Journal of Polymer Science Part A, 2001, 39, 2920-2928.	2.3	97
14	Hemi-Telechelic Polystyrene-POSS Copolymers as Model Systems for the Study of Well-Defined Inorganic/Organic Hybrid Materials. Macromolecules, 2004, 37, 5123-5126.	4.8	97
15	Highly Ordered Nanoporous Thin Films from Photocleavable Block Copolymers. Macromolecules, 2011, 44, 6433-6440.	4.8	97
16	Deoxybenzoin-Based Polyarylates as Halogen-Free Fire-Resistant Polymers. Macromolecules, 2006, 39, 3553-3558.	4.8	96
17	Synthesis and Characterization of Halogen-Free Antiflammable Polyphosphonates Containing 4,4â€˜-Bishydroxydeoxybenzoin. Macromolecules, 2006, 39, 5974-5975.	4.8	80
18	Influence of Chain Stiffness on Thermal and Mechanical Properties of Polymer Thin Films. Macromolecules, 2011, 44, 9040-9045.	4.8	77

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19	Synthesis and structureâ€“conductivity relationship of polystyreneâ€blockâ€poly(vinyl benzyl) Tj ETQq1 1 0.784314 rgBT /Ove Part B: Polymer Physics, 2013, 51, 1751-1760.	2.1	75
20	Alternating Copolymerizations of Polar and Nonpolar Cyclic Olefins by Ring-Opening Metathesis Polymerization. Macromolecules, 2002, 35, 54-58.	4.8	74
21	Photo-Cross-Linked Anion Exchange Membranes with Improved Water Management and Conductivity. Macromolecules, 2016, 49, 153-161.	4.8	68
22	Physicochemical properties of 1,2,3-triazolium ionic liquids. RSC Advances, 2012, 2, 848-853.	3.6	65
23	Intrinsically conducting polymers and copolymers containing triazole moieties. Solid State Ionics, 2007, 178, 1398-1403.	2.7	64
24	Toughening semicrystalline poly(lactic acid) by morphology alteration. Polymer, 2011, 52, 4184-4188.	3.8	63
25	Water-Free Proton-Conducting Polysiloxanes:â€‰ A Study on the Effect of Heterocycle Structure. Macromolecules, 2007, 40, 8708-8713.	4.8	62
26	Thermally Cross-Linked Anion Exchange Membranes from Solvent Processable Isoprene Containing Ionomers. Macromolecules, 2015, 48, 655-662.	4.8	61
27	Achieving Continuous Anion Transport Domains Using Block Copolymers Containing Phosphonium Cations. Macromolecules, 2016, 49, 4714-4722.	4.8	60
28	Peptide-Directed PdAu Nanoscale Surface Segregation: Toward Controlled Bimetallic Architecture for Catalytic Materials. ACS Nano, 2016, 10, 8645-8659.	14.6	58
29	Modular Norbornene Derivatives for the Preparation of Well-Defined Amphiphilic Polymers:Â Study of the Lipid Membrane Disruption Activities. Macromolecules, 2004, 37, 694-700.	4.8	54
30	Effect of midblock on the morphology and properties of blends of ABA triblock copolymers of PDLA-mid-block-PDLA with PLLA. Polymer, 2012, 53, 3008-3016.	3.8	53
31	Ethyleneâ€“Propyleneâ€“Silsesquioxane Thermoplastic Elastomers. Macromolecular Chemistry and Physics, 2008, 209, 1198-1209.	2.2	52
32	Directed Selfâ€Assembly of Poly(2â€vinylpyridine)â€bâ€polystyreneâ€bâ€poly(2â€vinylpyridine) Triblock Copolymer with Subâ€15 nm Spacing Line Patterns Using a Nanoimprinted Photoresist Template. Advanced Materials, 2015, 27, 4364-4370.	21.0	51
33	A Polyethylene-Based Triblock Copolymer Anion Exchange Membrane with High Conductivity and Practical Mechanical Properties. ACS Applied Polymer Materials, 2020, 2, 1294-1303.	4.4	48
34	Thieno[3,4-b]thiophene Acceptors with Alkyl, Aryl, Perfluoroalkyl, and Perfluorophenyl Pendants for Donorâ€“Acceptor Low Bandgap Polymers. Macromolecules, 2013, 46, 8873-8881.	4.8	46
35	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. Macromolecules, 2015, 48, 6978-6986.	4.8	46
36	Scission of Diblock Copolymers into Their Constituent Blocks. Macromolecules, 2006, 39, 1670-1672.	4.8	43

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37	Poly(arylateâ€phosphonate) copolymers with deoxybenzoin in the backbone: Synthesis, characterization, and thermal properties. Journal of Polymer Science Part A, 2007, 45, 4573-4580.	2.3	39
38	Thermal degradation of deoxybenzoin polymers studied by pyrolysis-gas chromatography/mass spectrometry. Polymer Degradation and Stability, 2008, 93, 1059-1066.	5.8	37
39	Using block copolymer architecture to achieve sub-10Ânm periods. Polymer, 2017, 121, 297-303.	3.8	37
40	Maintaining Structural Stability of Poly(lactic acid): Effects of Multifunctional Epoxy based Reactive Oligomers. Polymers, 2014, 6, 1232-1250.	4.5	35
41	Amphiphilic Carborane-Containing Diblock Copolymers. Macromolecules, 2007, 40, 5628-5630.	4.8	32
42	Proton conducting polymers containing 1Hâ€1,2,3â€triazole moieties. Journal of Polymer Science Part A, 2009, 47, 188-196.	2.3	32
43	Systematic Fluorination of P3HT: Synthesis of P(3HT-co-3H4FT)s by Direct Arylation Polymerization, Characterization, and Device Performance in OPVs. Macromolecules, 2016, 49, 3028-3037.	4.8	32
44	Photocleavable Triblock Copolymers Featuring an Activated Ester Middle Block: â€œOne-Stepâ€•Synthesis and Application as Locally Reactive Nanoporous Thin Films. ACS Macro Letters, 2013, 2, 966-969.	4.8	31
45	Stereocomplex Formation in Polylactide Multiarm Stars and Comb Copolymers with Linear and Hyperbranched Multifunctional PEG. Macromolecular Chemistry and Physics, 2013, 214, 1434-1444.	2.2	30
46	Insights into the Water Transport Mechanism in Polymeric Membranes from Neutron Scattering. Macromolecules, 2020, 53, 1443-1450.	4.8	30
47	Interplay between solid state transitions, conductivity mechanisms, and electrical relaxations in a [PVBTMA] [Br]-b-PMB diblock copolymer membrane for electrochemical applications. Physical Chemistry Chemical Physics, 2015, 17, 31125-31139.	2.8	29
48	Kinetic Modeling of the Effect of MAO/Zr Ratio and Chain Transfer to Aluminum in Zirconocene Catalyzed Propylene Polymerization. Macromolecules, 2006, 39, 4306-4316.	4.8	27
49	Hybrid inorganicâ€“organic proton exchange membranes containing 1H-1,2,3-triazole moieties. Solid State Ionics, 2010, 181, 1183-1188.	2.7	25
50	Utilization of Oligo(lactic acid) for Studies of Chain Conformation and Chain Packing in Poly(lactic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	4.8	25
51	Synthesis of Semicrystalline/Fluorinated Side-Chain Crystalline Block Copolymers and Their Bulk and Thin Film Nanoordering. Macromolecules, 2013, 46, 3737-3745.	4.8	24
52	Isotactic Poly(propylene) Crystallization: Role of Small Fractions of High or Low Molecular Weight Polymer. Macromolecular Chemistry and Physics, 2005, 206, 125-134.	2.2	22
53	Kinetic modeling of slurry propylene polymerization usingrac-ET(Ind)2ZrCl2/MAO. AICHE Journal, 2006, 52, 1824-1835.	3.6	22
54	Fluoroelastomer Copolymers Incorporating Polyhedral Oligomeric Silsesquioxane. Macromolecular Chemistry and Physics, 2008, 209, 2040-2048.	2.2	22

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55	Effect of Pendant Functionality in Thieno[3,4-b]thiophene-alt-benzodithiophene Polymers for OPVs. Chemistry of Materials, 2015, 27, 443-449.	6.7	22
56	Modifying the Structure and Dynamics of Ionomers through Counterion Sterics. Macromolecules, 2020, 53, 1767-1776.	4.8	22
57	Ion transport properties of mechanically stable symmetric ABCBA pentablock copolymers with quaternary ammonium functionalized midblock. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 612-622.	2.1	21
58	Interplay Between Hydroxyl Density and Relaxations in Poly(vinylbenzyltrimethylammonium)-b-poly(methylbutylene) Membranes for Electrochemical Applications. Journal of the American Chemical Society, 2018, 140, 1372-1384.	13.7	21
59	Phosphonium-Containing Block Copolymer Anion Exchange Membranes: Effect of Quaternization Level on Bulk and Surface Morphologies at Hydrated and Dehydrated States. Macromolecules, 2019, 52, 6097-6106.	4.8	21
60	Synthesis and photophysical properties of soluble lowâ€bandgap thienothiophene polymers with various alkyl sideâ€chain lengths. Journal of Polymer Science Part A, 2011, 49, 3260-3271.	2.3	18
61	Synthesis of photocleavable poly(methyl methacrylate-block-<scp>d</scp> -lactide) via atom-transfer radical polymerization and ring-opening polymerization. Journal of Polymer Science Part A, 2013, 51, 4309-4316.	2.3	18
62	Ringâ€opening metathesis copolymerization of cyclooctene and a carboraneâ€containing oxanorbornene. Journal of Polymer Science Part A, 2010, 48, 2557-2563.	2.3	17
63	Preparation and characterization of Pt/Pt:CeO_{2â^'x}nanorod catalysts for short chain alcohol electrooxidation in alkaline media. RSC Advances, 2014, 4, 33489-33496.	3.6	17
64	Water uptake profile in a model ion-exchange membrane: Conditions for water-rich channels. Journal of Chemical Physics, 2015, 142, 114906.	3.0	15
65	Thin, robust, and chemically stable photo-cross-linked anion exchange membranes based on a polychlorostyrene-b-polycyclooctene-b-polychlorostyrene ABA triblock polymer. Solid State Ionics, 2018, 316, 135-142.	2.7	14
66	Ring-opening metathesis polymerization of cobaltocenium derivative to prepare anion exchange membrane with high ionic conductivity. Polyhedron, 2020, 181, 114462.	2.2	14
67	Electrospinning Fibers from Oligomeric Complex Coacervates: No Chain Entanglements Needed. Macromolecules, 2021, 54, 5033-5042.	4.8	14
68	Functionalized Polybutadiene for Clayâ€“Polymer Nanocomposite Fabrication. Macromolecules, 2019, 52, 6135-6141.	4.8	13
69	Ultrasonic spectroscopic evaluation of the ring-opening metathesis polymerization of dicyclopentadiene. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 1323-1333.	2.1	12
70	Gas Manifold for Olefin Polymerization and a Convenient Reactor Design for the Parallel Screening of Catalysts. Macromolecules, 2002, 35, 9613-9616.	4.8	11
71	Silsesquioxanes: Recent Advancement and Novel Applications. International Journal of Polymer Science, 2012, 2012, 1-2.	2.7	11
72	Effect of Surface Alignment on Connectivity in Phosphonium-Containing Diblock Copolymer Anion-Exchange Membranes. Journal of Physical Chemistry C, 2019, 123, 30819-30826.	3.1	11

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73	Copolymerizations of ethylene and Î±-olefins with supported piano-stool catalysts. Polyhedron, 2005, 24, 1347-1355.	2.2	10
74	Linear or Branched Polyethylenes from Supported Aryloxytitanium(IV)â"Cyclopentadienyl Complexes. Macromolecules, 2003, 36, 6300-6304.	4.8	9
75	Mechanical Performance of Polyisoprene Copolymer Anion Exchange Membranes by Varying Crosslinking Methods. Journal of the Electrochemical Society, 2015, 162, H206-H212.	2.9	9
76	Crosslinked anion exchange membranes with connected cations. Journal of Polymer Science Part A, 2018, 56, 618-625.	2.3	9
77	Progression of the Morphology in Random Ionomers Containing Bulky Ammonium Counterions. Macromolecules, 2018, 51, 7377-7385.	4.8	9
78	Enhancing desalination performance by manipulating block ratios in a polyethylene-based triblock copolymer anion exchange membrane for electrodialysis. Journal of Membrane Science, 2022, 647, 120295.	8.2	9
79	Origin of the formation of the 4-butenyl end group in zirconocene-catalyzed propylene polymerization. Journal of Polymer Science Part A, 2006, 44, 3724-3728.	2.3	8
80	Amphiphilic Polymers with Potent Antibacterial Activity. ACS Symposium Series, 2007, , 175-197.	0.5	7
81	Polymers and Copolymers Containing Covalently Bonded Polyhedral Oligomeric Silsesquioxanes Moieties. Advances in Silicon Science, 2011, , 167-207.	0.6	7
82	Effects of Molecular Architecture on the Stereocomplex Crystallization in Poly(lactic acid) Blends. Macromolecular Chemistry and Physics, 2014, 215, 320-326.	2.2	7
83	Assembly of Disordered Cocontinuous Morphologies by Multiblock Copolymers with Random Block Sequence and Length Dispersity. ACS Applied Polymer Materials, 2020, 2, 3282-3290.	4.4	7
84	Alkaline Stability Evaluation of Polymerizable Hexylâ€Tethered Ammonium Cations. Macromolecular Rapid Communications, 2022, 43, e2100610.	3.9	7
85	Selective nitrogen protection of hydroxyalkylbenzimidazoles using 2,2,2-trichloroethylchloroformate. Tetrahedron Letters, 2005, 46, 6311-6313.	1.4	5
86	Tuning microdomain spacing with light using orthoâ€nitrobenzylâ€linked triblock copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2018, 56, 355-361.	2.1	5
87	Investigating Silver Nanoparticle Interactions with Quaternary Ammonium Functionalized Triblock Copolymers and Their Effect on Midblock Crystallinity. ACS Applied Polymer Materials, 2020, 2, 4914-4923.	4.4	5
88	Evaluating the effect of ionomer chemical composition in silver-ionomer catalyst inks toward the oxygen evolution reaction by half-cell measurements and water electrolysis. Electrochimica Acta, 2022, 412, 140124.	5.2	5
89	Nonconventional Elements in Block Copolymers. ACS Symposium Series, 2011, , 53-70.	0.5	3
90	Optimization of anionic conductivity through the coexistence of ionomer cluster and backboneâ€backbone morphologies in anion exchange membranes. Journal of Polymer Science, 2020, 58, 3446-3455.	3.8	3

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91	Designing Anion-Exchange Ionomers with Oriented Nanoscale Phase Separation at a Silver Interface. Journal of Physical Chemistry C, 2021, 125, 20592-20605.	3.1	3
92	Visualization of Polymer Dynamics in Cellulose Nanocrystal Matrices Using Fluorescence Lifetime Measurements. ACS Applied Materials & Interfaces, 2022, 14, 10793-10804.	8.0	3
93	Block Copolymers Containing Quaternary Benzyl Ammonium Cations for Alkaline Anion Exchange Membrane Fuel Cells (AAEMFC). ACS Symposium Series, 2012, , 253-265.	0.5	2
94	Pendant sideâ€chain sterics against electrostatic forces: Influencing shortâ€range ordering in random polyelectrolytes. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1325-1336.	2.1	2
95	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. Macromolecules, 2021, 54, 4401-4411.	4.8	2
96	Dinonylphenyl end-capped poly(ethylene glycol)-b-polystyrene: synthesis and its unusual crystalline and self-assembly behaviors. Journal of Materials Science, 2015, 50, 4280-4287.	3.7	1
97	Melt Mastication of Isotactic Polyproyplene for Improved Thermal and Physical Properties. Polymer Engineering and Science, 2020, 60, 380-386.	3.1	1
98	Inorganic-Organic Hybrid Copolymers derived from Silsesquioxanes or Carborane Building Blocks. Materials Research Society Symposia Proceedings, 2011, 1312, 1.	0.1	0
99	(Invited) Tuning Triblock Co-Polymer Silver Interactions on the Nanoscale to Enhance Transport in Electrodes for Electrochemical Devices Based on Anion Exchange Membranes. ECS Meeting Abstracts, 2021, MA2021-01, 1915-1915.	0.0	0
100	Maximizing the Oxygen Evolution Reaction by Optimizing Ionomer Structure in Anion Exchange Membrane Electrolysis. ECS Meeting Abstracts, 2021, MA2021-02, 1241-1241.	0.0	0