

Benny D Freeman

List of Publications by Year in descending order

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430
papers

42,099
citations

2543

96
h-index

2825

191
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461
all docs

461
docs citations

461
times ranked

21945
citing authors

#	ARTICLE	IF	CITATIONS
1	Reverse osmosis desalination: Water sources, technology, and today's challenges. <i>Water Research</i> , 2009, 43, 2317-2348.	5.3	2,496
2	Maximizing the right stuff: The trade-off between membrane permeability and selectivity. <i>Science</i> , 2017, 356, .	6.0	1,864
3	Basis of Permeability/Selectivity Tradeoff Relations in Polymeric Gas Separation Membranes. <i>Macromolecules</i> , 1999, 32, 375-380.	2.2	1,353
4	Energy-efficient polymeric gas separation membranes for a sustainable future: A review. <i>Polymer</i> , 2013, 54, 4729-4761.	1.8	1,144
5	Ultraporous, Reverse-Selective Nanocomposite Membranes. <i>Science</i> , 2002, 296, 519-522.	6.0	999
6	Gas sorption, diffusion, and permeation in poly(dimethylsiloxane). <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2000, 38, 415-434.	2.4	957
7	Elucidating the Structure of Poly(dopamine). <i>Langmuir</i> , 2012, 28, 6428-6435.	1.6	920
8	Polymers with Cavities Tuned for Fast Selective Transport of Small Molecules and Ions. <i>Science</i> , 2007, 318, 254-258.	6.0	919
9	Water purification by membranes: The role of polymer science. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2010, 48, 1685-1718.	2.4	798
10	<i>50th Anniversary Perspective</i>: Polymers and Mixed Matrix Membranes for Gas and Vapor Separation: A Review and Prospective Opportunities. <i>Macromolecules</i> , 2017, 50, 7809-7843.	2.2	709
11	Materials selection guidelines for membranes that remove CO ₂ from gas mixtures. <i>Journal of Molecular Structure</i> , 2005, 739, 57-74.	1.8	697
12	Gas solubility, diffusivity and permeability in poly(ethylene oxide). <i>Journal of Membrane Science</i> , 2004, 239, 105-117.	4.1	664
13	Water permeability and water/salt selectivity tradeoff in polymers for desalination. <i>Journal of Membrane Science</i> , 2011, 369, 130-138.	4.1	641
14	Plasticization-Enhanced Hydrogen Purification Using Polymeric Membranes. <i>Science</i> , 2006, 311, 639-642.	6.0	616
15	Fundamental water and salt transport properties of polymeric materials. <i>Progress in Polymer Science</i> , 2014, 39, 1-42.	11.8	597
16	Poly[1-(trimethylsilyl)-1-propyne] and related polymers: synthesis, properties and functions. <i>Progress in Polymer Science</i> , 2001, 26, 721-798.	11.8	596
17	Surface Modification of Water Purification Membranes. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 4662-4711.	7.2	564
18	Gas separation using polymer membranes: an overview. <i>Polymers for Advanced Technologies</i> , 1994, 5, 673-697.	1.6	479

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19	Gas transport properties of poly(ether-b-amide) segmented block copolymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2000, 38, 2051-2062.	2.4	382
20	Ultrafast selective transport of alkali metal ions in metal organic frameworks with subnanometer pores. <i>Science Advances</i> , 2018, 4, eaaq0066.	4.7	368
21	Sorption, Transport, and Structural Evidence for Enhanced Free Volume in Poly(4-methyl-2-pentyne)/Fumed Silica Nanocomposite Membranes. <i>Chemistry of Materials</i> , 2003, 15, 109-123.	3.2	341
22	Influence of polydopamine deposition conditions on pure water flux and foulant adhesion resistance of reverse osmosis, ultrafiltration, and microfiltration membranes. <i>Polymer</i> , 2010, 51, 3472-3485.	1.8	338
23	Perspectives on poly(dopamine). <i>Chemical Science</i> , 2013, 4, 3796.	3.7	338
24	Confined Crystallization of Polyethylene Oxide in Nanolayer Assemblies. <i>Science</i> , 2009, 323, 757-760.	6.0	334
25	Polyamide interfacial composite membranes prepared from m-phenylene diamine, trimesoyl chloride and a new disulfonated diamine. <i>Journal of Membrane Science</i> , 2012, 403-404, 152-161.	4.1	321
26	Surface modification of thin film composite membrane support layers with polydopamine: Enabling use of reverse osmosis membranes in pressure retarded osmosis. <i>Journal of Membrane Science</i> , 2011, 375, 55-62.	4.1	297
27	A bioinspired fouling-resistant surface modification for water purification membranes. <i>Journal of Membrane Science</i> , 2012, 413-414, 82-90.	4.1	295
28	Transport and structural characteristics of crosslinked poly(ethylene oxide) rubbers. <i>Journal of Membrane Science</i> , 2006, 276, 145-161.	4.1	288
29	Gas sorption and characterization of poly(ether-b-amide) segmented block copolymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1999, 37, 2463-2475.	2.4	284
30	The Effect of Cross-Linking on Gas Permeability in Cross-Linked Poly(Ethylene Glycol Diacrylate). <i>Macromolecules</i> , 2005, 38, 8381-8393.	2.2	277
31	Efficient metal ion sieving in rectifying subnanochannels enabled by metal-organic frameworks. <i>Nature Materials</i> , 2020, 19, 767-774.	13.3	275
32	PEG-coated reverse osmosis membranes: Desalination properties and fouling resistance. <i>Journal of Membrane Science</i> , 2009, 340, 92-108.	4.1	260
33	Effect of polydopamine deposition conditions on fouling resistance, physical properties, and permeation properties of reverse osmosis membranes in oil/water separation. <i>Journal of Membrane Science</i> , 2013, 425-426, 208-216.	4.1	250
34	Effect of Nanoparticles on Gas Sorption and Transport in Poly(1-trimethylsilyl-1-propyne). <i>Macromolecules</i> , 2003, 36, 6844-6855.	2.2	246
35	Physical aging of ultrathin glassy polymer films tracked by gas permeability. <i>Polymer</i> , 2009, 50, 5565-5575.	1.8	229
36	Highly Chlorine-Tolerant Polymers for Desalination. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 6019-6024.	7.2	220

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37	High-Performance Polymer Membranes for Natural-Gas Sweetening. <i>Advanced Materials</i> , 2006, 18, 39-44.	11.1	217
38	Surface modification of commercial polyamide desalination membranes using poly(ethylene glycol) diglycidyl ether to enhance membrane fouling resistance. <i>Journal of Membrane Science</i> , 2011, 367, 273-287.	4.1	209
39	Oxygen Concentration Control of Dopamine-Induced High Uniformity Surface Coating Chemistry. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 233-238.	4.0	206
40	Short-term adhesion and long-term biofouling testing of polydopamine and poly(ethylene glycol) surface modifications of membranes and feed spacers for biofouling control. <i>Water Research</i> , 2012, 46, 3737-3753.	5.3	204
41	Crosslinked poly(ethylene oxide) fouling resistant coating materials for oil/water separation. <i>Journal of Membrane Science</i> , 2008, 307, 260-267.	4.1	203
42	Mixed-gas permeation of syngas components in poly(dimethylsiloxane) and poly(1-trimethylsilyl-1-propyne) at elevated temperatures. <i>Journal of Membrane Science</i> , 2001, 191, 85-94.	4.1	197
43	Influence of temperature on the upper bound: Theoretical considerations and comparison with experimental results. <i>Journal of Membrane Science</i> , 2010, 360, 58-69.	4.1	184
44	An empirical correlation of gas permeability and permselectivity in polymers and its theoretical basis. <i>Journal of Membrane Science</i> , 2009, 341, 178-185.	4.1	178
45	Synthesis and characterization of triptycene-based polyimides with tunable high fractional free volume for gas separation membranes. <i>Journal of Materials Chemistry A</i> , 2014, 2, 13309-13320.	5.2	175
46	Sorption and transport of hydrocarbon and perfluorocarbon gases in poly(1-trimethylsilyl-1-propyne). <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2000, 38, 273-296.	2.4	170
47	Contributions of diffusion and solubility selectivity to the upper bound analysis for glassy gas separation membranes. <i>Journal of Membrane Science</i> , 2014, 453, 71-83.	4.1	170
48	Comparison of membrane fouling at constant flux and constant transmembrane pressure conditions. <i>Journal of Membrane Science</i> , 2014, 454, 505-515.	4.1	169
49	Gas and Vapor Sorption, Permeation, and Diffusion in Glassy Amorphous Teflon AF1600. <i>Macromolecules</i> , 2002, 35, 9513-9522.	2.2	168
50	Modeling multicomponent gas separation using hollow-fiber membrane contactors. <i>AIChE Journal</i> , 1998, 44, 1289-1302.	1.8	167
51	Gas Sorption, Diffusion, and Permeation in Poly(2,2-bis(trifluoromethyl)-4,5-difluoro-1,3-dioxole-co-tetrafluoroethylene). <i>Macromolecules</i> , 1999, 32, 8427-8440.	2.2	166
52	Gas Permeation and Diffusion in Cross-Linked Poly(ethylene glycol diacrylate). <i>Macromolecules</i> , 2006, 39, 3568-3580.	2.2	165
53	Characterization of sodium chloride and water transport in crosslinked poly(ethylene oxide) hydrogels. <i>Journal of Membrane Science</i> , 2010, 358, 131-141.	4.1	160
54	Characterization of a sulfonated pentablock copolymer for desalination applications. <i>Polymer</i> , 2010, 51, 5815-5822.	1.8	160

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55	Effect of Basic Substituents on Gas Sorption and Permeation in Polysulfone. <i>Macromolecules</i> , 1996, 29, 4360-4369.	2.2	158
56	Fast and selective fluoride ion conduction in sub-1-nanometer metal-organic framework channels. <i>Nature Communications</i> , 2019, 10, 2490.	5.8	158
57	Gas and Vapor Solubility in Cross-Linked Poly(ethylene Glycol Diacrylate). <i>Macromolecules</i> , 2005, 38, 8394-8407.	2.2	157
58	Water Sorption, Proton Conduction, and Methanol Permeation Properties of Sulfonated Polyimide Membranes Cross-Linked with N,N-Bis(2-hydroxyethyl)-2-aminoethanesulfonic Acid (BES). <i>Macromolecules</i> , 2006, 39, 755-764.	2.2	155
59	Ion Activity Coefficients in Ion Exchange Polymers: Applicability of Manning's Counterion Condensation Theory. <i>Macromolecules</i> , 2015, 48, 8011-8024.	2.2	154
60	Comparison of transport properties of rubbery and glassy polymers and the relevance to the upper bound relationship. <i>Journal of Membrane Science</i> , 2015, 476, 421-431.	4.1	153
61	Partitioning of mobile ions between ion exchange polymers and aqueous salt solutions: importance of counter-ion condensation. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 6021-6031.	1.3	148
62	Gas permeability, diffusivity, and free volume of thermally rearranged polymers based on 3,3'-dihydroxy-4,4'-diamino-biphenyl (HAB) and 2,2'-bis-(3,4-dicarboxyphenyl) hexafluoropropane dianhydride (6FDA). <i>Journal of Membrane Science</i> , 2012, 409-410, 232-241.	4.1	146
63	Preparation and characterization of crosslinked poly(ethylene glycol) diacrylate hydrogels as fouling-resistant membrane coating materials. <i>Journal of Membrane Science</i> , 2009, 330, 180-188.	4.1	145
64	Polymeric Membranes for Chiral Separation of Pharmaceuticals and Chemicals. <i>Polymer Reviews</i> , 2010, 50, 113-143.	5.3	144
65	Pure and mixed gas acetone/nitrogen permeation properties of polydimethylsiloxane [PDMS]. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1998, 36, 289-301.	2.4	140
66	Transport of Gases and Vapors in Glassy and Rubbery Polymers. , 2006, , 1-47.		136
67	Effect of Free Volume on Water and Salt Transport Properties in Directly Copolymerized Disulfonated Poly(arylene ether sulfone) Random Copolymers. <i>Macromolecules</i> , 2011, 44, 4428-4438.	2.2	133
68	Pure and mixed gas CH ₄ and n-C ₄ H ₁₀ permeability and diffusivity in poly(dimethylsiloxane). <i>Journal of Membrane Science</i> , 2007, 306, 75-92.	4.1	132
69	Sorption and Transport in Poly(2,2-bis(trifluoromethyl)-4,5-difluoro-1,3-dioxole-co-tetrafluoroethylene) Containing Nanoscale Fumed Silica. <i>Macromolecules</i> , 2003, 36, 8406-8414.	2.2	130
70	Graphene Oxide: A New Platform for High-Performance Gas and Liquid Separation Membranes. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 10286-10288.	7.2	130
71	Sodium chloride sorption in sulfonated polymers for membrane applications. <i>Journal of Membrane Science</i> , 2012, 423-424, 195-208.	4.1	128
72	Predicting Salt Permeability Coefficients in Highly Swollen, Highly Charged Ion Exchange Membranes. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 4044-4056.	4.0	126

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73	Highly CO ₂ -Selective Gas Separation Membranes Based on Segmented Copolymers of Poly(Ethylene oxide) Reinforced with Penttiptycene-Containing Polyimide Hard Segments. ACS Applied Materials & Interfaces, 2016, 8, 2306-2317.	4.0	125
74	Ion Diffusion Coefficients in Ion Exchange Membranes: Significance of Counterion Condensation. Macromolecules, 2018, 51, 5519-5529.	2.2	123
75	Molecular Dynamics for Polymeric Fluids Using Discontinuous Potentials. Journal of Computational Physics, 1997, 134, 16-30.	1.9	122
76	Propane and propylene sorption in solid polymer electrolytes based on poly(ethylene oxide) and silver salts. Journal of Membrane Science, 2001, 182, 1-12.	4.1	120
77	Synthesis and crosslinking of partially disulfonated poly(arylene ether-sulfone) random copolymers as candidates for chlorine resistant reverse osmosis membranes. Polymer, 2008, 49, 2243-2252.	1.8	120
78	Fouling-resistant membranes for the treatment of flowback water from hydraulic shale fracturing: A pilot study. Journal of Membrane Science, 2013, 437, 265-275.	4.1	120
79	Gas transport in TiO ₂ nanoparticle-filled poly(1-trimethylsilyl-1-propyne). Journal of Membrane Science, 2008, 307, 196-217.	4.1	119
80	Gas sorption and characterization of thermally rearranged polyimides based on 3,3'-dihydroxy-4,4'-diamino-biphenyl (HAB) and 2,2'-bis-(3,4-dicarboxyphenyl) hexafluoropropane dianhydride (6FDA). Journal of Membrane Science, 2012, 415-416, 558-567.	4.1	119
81	Salt concentration dependence of ionic conductivity in ion exchange membranes. Journal of Membrane Science, 2018, 547, 123-133.	4.1	119
82	Sorption of Gases and Vapors in an Amorphous Glassy Perfluorodioxole Copolymer. Macromolecules, 1999, 32, 6163-6171.	2.2	115
83	PEG-based hydrogel membrane coatings. Polymer, 2009, 50, 756-766.	1.8	115
84	Pure-Gas and Vapor Permeation and Sorption Properties of Poly[1-phenyl-2-[p-(trimethylsilyl)phenyl]acetylene] (PTMSDPA). Macromolecules, 2000, 33, 2516-2524.	2.2	114
85	Effect of crosslinked chain length in sulfonated polyimide membranes on water sorption, proton conduction, and methanol permeation properties. Journal of Membrane Science, 2006, 285, 432-443.	4.1	114
86	The effect of antiscalant addition on calcium carbonate precipitation for a simplified synthetic brackish water reverse osmosis concentrate. Water Research, 2010, 44, 2957-2969.	5.3	114
87	Pure and mixed gas CH ₄ and n-C ₄ H ₁₀ sorption and dilation in poly(dimethylsiloxane). Journal of Membrane Science, 2007, 292, 45-61.	4.1	113
88	Fundamental salt and water transport properties in directly copolymerized disulfonated poly(arylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.8	112
89	Fouling mechanisms in constant flux crossflow ultrafiltration. Journal of Membrane Science, 2019, 574, 65-75.	4.1	109
90	Gas separation properties of aromatic polyimides. Journal of Membrane Science, 2003, 215, 61-73.	4.1	108

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91	High-performance CO ₂ -philic graphene oxide membranes under wet-conditions. <i>Chemical Communications</i> , 2014, 50, 13563-13566.	2.2	105
92	Effect of fixed charge group concentration on equilibrium ion sorption in ion exchange membranes. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4638-4650.	5.2	105
93	Hydrocarbon and Perfluorocarbon Gas Sorption in Poly(dimethylsiloxane), Poly(1-trimethylsilyl-1-propyne), and Copolymers of Tetrafluoroethylene and 2,2-Bis(trifluoromethyl)-4,5-difluoro-1,3-dioxole. <i>Macromolecules</i> , 1999, 32, 370-374.	2.2	102
94	Charged Polymer Membranes for Environmental/Energy Applications. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2016, 7, 111-133.	3.3	102
95	Gas and Vapor Sorption and Permeation in Poly(2,2,4-trifluoro-5-trifluoromethoxy-1,3-dioxole-co-tetrafluoroethylene). <i>Macromolecules</i> , 2004, 37, 7688-7697.	2.2	101
96	Synthesis and Properties of Indan-Based Polyacetylenes That Feature the Highest Gas Permeability among All the Existing Polymers. <i>Macromolecules</i> , 2008, 41, 8525-8532.	2.2	101
97	Sodium chloride diffusion in sulfonated polymers for membrane applications. <i>Journal of Membrane Science</i> , 2013, 427, 186-196.	4.1	101
98	Penttiptycene-based polyimides with hierarchically controlled molecular cavity architecture for efficient membrane gas separation. <i>Journal of Membrane Science</i> , 2015, 480, 20-30.	4.1	101
99	Underwater Superoleophobic Surfaces Prepared from Polymer Zwitterion/Dopamine Composite Coatings. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500521.	1.9	100
100	Gas permeation properties of poly(urethane-urea)s containing different polyethers. <i>Journal of Membrane Science</i> , 2011, 369, 49-58.	4.1	98
101	Effect of crossflow testing conditions, including feed pH and continuous feed filtration, on commercial reverse osmosis membrane performance. <i>Journal of Membrane Science</i> , 2009, 345, 97-109.	4.1	97
102	A variable energy positron annihilation lifetime spectroscopy study of physical aging in thin glassy polymer films. <i>Polymer</i> , 2009, 50, 6149-6156.	1.8	97
103	On the effects of plasticization in CO ₂ /light gas separation using polymeric solubility selective membranes. <i>Journal of Membrane Science</i> , 2011, 367, 33-44.	4.1	97
104	Cavity size, sorption and transport characteristics of thermally rearranged (TR) polymers. <i>Polymer</i> , 2011, 52, 2244-2254.	1.8	97
105	Gas transport properties of MgO filled poly(1-trimethylsilyl-1-propyne) nanocomposites. <i>Polymer</i> , 2008, 49, 1659-1675.	1.8	96
106	Reactive Amphiphilic Graft Copolymer Coatings Applied to Poly(vinylidene fluoride) Ultrafiltration Membranes. <i>Macromolecules</i> , 2007, 40, 3624-3630.	2.2	94
107	Pure- and mixed-gas permeation of CO ₂ and CH ₄ in thermally rearranged polymers based on 3,3'-dihydroxy-4,4'-diamino-biphenyl (HAB) and 2,2'-bis-(3,4-dicarboxyphenyl) hexafluoropropane dianhydride (6FDA). <i>Journal of Membrane Science</i> , 2015, 475, 204-214.	4.1	93
108	Influence of methanol conditioning and physical aging on carbon spin-lattice relaxation times of poly(1-trimethylsilyl-1-propyne). <i>Journal of Membrane Science</i> , 2004, 243, 37-44.	4.1	92

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109	Hydrocarbon and fluorocarbon solubility and dilation in poly(dimethylsiloxane): Comparison of experimental data with predictions of the Sanchez-Lacombe equation of state. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1999, 37, 3011-3026.	2.4	91
110	Water uptake, transport and structure characterization in poly(ethylene glycol) diacrylate hydrogels. <i>Journal of Membrane Science</i> , 2010, 347, 197-208.	4.1	88
111	Bifunctional hydrogel coatings for water purification membranes: Improved fouling resistance and antimicrobial activity. <i>Journal of Membrane Science</i> , 2011, 372, 285-291.	4.1	88
112	Impact of feed spacer and membrane modification by hydrophilic, bactericidal and biocidal coating on biofouling control. <i>Desalination</i> , 2012, 295, 1-10.	4.0	88
113	Constant flux crossflow filtration evaluation of surface-modified fouling-resistant membranes. <i>Journal of Membrane Science</i> , 2014, 452, 171-183.	4.1	88
114	Gas Sorption and Dilation in Poly(2,2-bis(trifluoromethyl)-4,5-difluoro-1,3-dioxole-co-tetrafluoroethylene): A Comparison of Experimental Data with Predictions of the Nonequilibrium Lattice Fluid Model. <i>Macromolecules</i> , 2002, 35, 1276-1288.	2.2	87
115	Influence of polydopamine deposition conditions on hydraulic permeability, sieving coefficients, pore size and pore size distribution for a polysulfone ultrafiltration membrane. <i>Journal of Membrane Science</i> , 2017, 522, 100-115.	4.1	87
116	Hydrocarbon/hydrogen mixed gas permeation in poly(1-trimethylsilyl-1-propyne) (PTMSP), poly(1-phenyl-1-propyne) (PPP), and PTMSP/PPP blends. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1996, 34, 2613-2621.	2.4	86
117	Polymer characterization and gas permeability of poly(1-trimethylsilyl-1-propyne) [PTMSP], poly(1-phenyl-1-propyne) [PPP], and PTMSP/PPP blends. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1996, 34, 2209-2222.	2.4	85
118	Synthesis and characterization of Thermally Rearranged (TR) polymers: influence of ortho-positioned functional groups of polyimide precursors on TR process and gas transport properties. <i>Journal of Materials Chemistry A</i> , 2013, 1, 262-272.	5.2	85
119	Dynamic relaxation characteristics of Matrimid® polyimide. <i>Polymer</i> , 2009, 50, 891-897.	1.8	83
120	Novel thin film composite membrane containing ionizable hydrophobes: pH-dependent reverse osmosis behavior and improved chlorine resistance. <i>Journal of Materials Chemistry</i> , 2010, 20, 4615.	6.7	83
121	Gas permeation in thin films of high free-volume glassy perfluoropolymers: Part I. Physical aging. <i>Polymer</i> , 2014, 55, 5788-5800.	1.8	83
122	Synthesis and characterization of thermally rearranged (TR) polymers: effect of glass transition temperature of aromatic poly(hydroxyimide) precursors on TR process and gas permeation properties. <i>Journal of Materials Chemistry A</i> , 2013, 1, 6063.	5.2	82
123	Solute and water transport in forward osmosis using polydopamine modified thin film composite membranes. <i>Desalination</i> , 2014, 343, 8-16.	4.0	82
124	Segmental Relaxation Characteristics of Cross-Linked Poly(ethylene oxide) Copolymer Networks. <i>Macromolecules</i> , 2005, 38, 9679-9687.	2.2	80
125	Crosslinking poly[1-(trimethylsilyl)-1-propyne] and its effect on physical stability. <i>Journal of Membrane Science</i> , 2008, 320, 123-134.	4.1	80
126	Analysis of the transport properties of thermally rearranged (TR) polymers and polymers of intrinsic microporosity (PIM) relative to upper bound performance. <i>Journal of Membrane Science</i> , 2017, 525, 18-24.	4.1	80

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127	A molecular simulation study of cavity size distributions and diffusion in para and meta isomers. <i>Polymer</i> , 2005, 46, 9155-9161.	1.8	79
128	Gas Permeability and Free Volume of Highly Branched Substituted Acetylene Polymers. <i>Macromolecules</i> , 2001, 34, 1788-1796.	2.2	78
129	Effect of physical aging of poly(1-trimethylsilyl-1-propyne) films synthesized with TaCl ₅ and NbCl ₅ on gas permeability, fractional free volume, and positron annihilation lifetime spectroscopy parameters. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2000, 38, 1222-1239.	2.4	77
130	Gas permeability of melt-processed poly(ether block amide) copolymers and the effects of orientation. <i>Polymer</i> , 2012, 53, 1383-1392.	1.8	76
131	Effect of copolymer composition, temperature, and carbon dioxide fugacity on pure- and mixed-gas permeability in poly(ethylene glycol)-based materials: Free volume interpretation. <i>Journal of Membrane Science</i> , 2007, 291, 131-139.	4.1	75
132	Gas permeation and selectivity of poly(dimethylsiloxane)/graphene oxide composite elastomer membranes. <i>Journal of Membrane Science</i> , 2016, 518, 131-140.	4.1	73
133	Effect of polydopamine deposition conditions on polysulfone ultrafiltration membrane properties and threshold flux during oil/water emulsion filtration. <i>Polymer</i> , 2016, 97, 247-257.	1.8	72
134	Thermal rearranged poly(benzoxazole-co-imide) membranes for CO ₂ separation. <i>Journal of Membrane Science</i> , 2014, 450, 72-80.	4.1	71
135	Porosity enhancement in \hat{I}^2 nucleated isotactic polypropylene stretched films by thermal annealing. <i>Polymer</i> , 2013, 54, 2577-2589.	1.8	70
136	Polymeric Materials for Gas Separations. ACS Symposium Series, 1999, , 1-27.	0.5	68
137	Preparation and gas permeation of immobilized fullerene membranes. <i>Journal of Applied Polymer Science</i> , 2000, 77, 529-537.	1.3	68
138	Sorption and Transport Properties of Propane and Perfluoropropane in Poly(dimethylsiloxane) and Poly(1-trimethylsilyl-1-propyne). <i>Macromolecules</i> , 2005, 38, 1899-1910.	2.2	68
139	The effect of permeate flux on membrane fouling during microfiltration of oily water. <i>Journal of Membrane Science</i> , 2017, 525, 25-34.	4.1	68
140	Gas separation properties of aromatic polyamides containing hexafluoroisopropylidene groups. <i>Journal of Membrane Science</i> , 1995, 104, 231-241.	4.1	66
141	New protein-resistant coatings for water filtration membranes based on quaternary ammonium and phosphonium polymers. <i>Journal of Membrane Science</i> , 2009, 330, 104-116.	4.1	65
142	Engineering Li/Na selectivity in 12-Crown-4 functionalized polymer membranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	65
143	Monovalent and divalent ion sorption in a cation exchange membrane based on cross-linked poly(p-styrene sulfonate-co-divinylbenzene). <i>Journal of Membrane Science</i> , 2017, 535, 132-142.	4.1	64
144	Cavity size distributions in high free volume glassy polymers by molecular simulation. <i>Polymer</i> , 2004, 45, 3907-3912.	1.8	63

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145	Effect of polymer structure on gas transport properties of selected aromatic polyimides, polyamides and TR polymers. <i>Journal of Membrane Science</i> , 2015, 493, 766-781.	4.1	63
146	Gas permeation and mechanical properties of thermally rearranged (TR) copolyimides. <i>Polymer</i> , 2016, 82, 378-391.	1.8	63
147	Gas and Vapor Transport Properties of Perfluoropolymers. , 2006, , 251-270.		62
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