Richard D Noble

List of Publications by Year
in descending order

248 papers	21,169 citations	7069 78 h-index	11030 137 g-index
258 all docs	258 docs citations	258 times ranked	11094 citing authors

#	Article	IF	Citations
1	Designing the Next Generation of Chemical Separation Membranes. Science, 2011, 332, 674-676.	6.0	667
2	Guide to CO₂ Separations in Imidazolium-Based Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2009, 48, 2739-2751.	1.8	656
3	Fundamentals and applications of pervaporation through zeolite membranes. Journal of Membrane Science, 2004, 245, 1-33.	4.1	577
4	Room-Temperature Ionic Liquids and Composite Materials: Platform Technologies for CO₂ Capture. Accounts of Chemical Research, 2010, 43, 152-159.	7.6	569
5	Gas separations using non-hexafluorophosphate [PF6]âˆ’ anion supported ionic liquid membranes. Journal of Membrane Science, 2004, 238, 57-63.	4.1	451
6	Combination of ionic liquids with membrane technology: A new approach for CO2 separation. Journal of Membrane Science, 2016, 497, 1-20.	4.1	439
7	Room-Temperature Ionic Liquidâˆ’Amine Solutions: Tunable Solvents for Efficient and Reversible Capture of CO₂. Industrial & Engineering Chemistry Research, 2008, 47, 8496-8498.	1.8	412
8	Synthesis and Performance of Polymerizable Room-Temperature Ionic Liquids as Gas Separation Membranes. Industrial & Engineering Chemistry Research, 2007, 46, 5397-5404.	1.8	379
9	Room-Temperature Ionic Liquids:â€‰ Temperature Dependence of Gas Solubility Selectivity. Industrial & Engineering Chemistry Research, 2008, 47, 3453-3459.	1.8	333
10	Gas Solubilities in Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2004, 43, 3049-3054.	1.8	314
11	Alumina-Supported SAPO-34 Membranes for CO₂/CH₄ Separation. Journal of the American Chemical Society, 2008, 130, 5412-5413.	6.6	291
12	Ending Aging in Super Glassy Polymer Membranes. Angewandte Chemie - International Edition, 2014, 53, 5322-5326.	7.2	275
13	Regular Solution Theory and CO2Gas Solubility in Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2004, 43, 6855-6860.	1.8	274
14	Highly CO₂-Selective Organic Molecular Cages: What Determines the CO₂ Selectivity. Journal of the American Chemical Society, 2011, 133, 6650-6658.	6.6	241
15	New Type of Membrane Material for Water Desalination Based on a Cross-Linked Bicontinuous Cubic Lyotropic Liquid Crystal Assembly. Journal of the American Chemical Society, 2007, 129, 9574-9575.	6.6	238
16	Improving CO2 selectivity in polymerized room-temperature ionic liquid gas separation membranes through incorporation of polar substituents. Journal of Membrane Science, 2008, 321, 3-7.	4.1	233
17	Improving CO₂ permeability in polymerized roomâ€‘temperature ionic liquid gas separation membranes through the formation of a solid composite with a roomâ€‘temperature ionic liquid. Polymers for Advanced Technologies, 2008, 19, 1415-1420.	1.6	228
18	Enhanced CO₂ Separation Selectivity in Oligo(ethylene glycol) Functionalized Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2007, 46, 5380-5386.	1.8	227

#	Article	IF	Citations
19	Perspective on ionic liquids and ionic liquid membranes. Journal of Membrane Science, 2011, 369, 1-4.	4.1	227
20	Gas separations in fluoroalkyl-functionalized room-temperature ionic liquids using supported liquid membranes. Chemical Engineering Journal, 2009, 147, 43-50.	6.6	225
21	A Shapeâ€Persistent Organic Molecular Cage with High Selectivity for the Adsorption of CO₂ over N₂. Angewandte Chemie - International Edition, 2010, 49, 6348-6351.	7.2	225
22	Bulk-Fluid Solubility and Membrane Feasibility of Rmim-Based Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2006, 45, 6279-6283.	1.8	221
23	High Density, Vertically-Aligned Carbon Nanotube Membranes. Nano Letters, 2009, 9, 225-229.	4.5	220
24	Low Pressure Hydrocarbon Solubility in Room Temperature Ionic Liquids Containing Imidazolium Rings Interpreted Using Regular Solution Theory. Industrial & Engineering Chemistry Research, 2005, 44, 1928-1933.	1.8	211
25	Characterization and permeation properties of ZSM-5 tubular membranes. AICHE Journal, 1997, 43, 1797-1812.	1.8	208
26	Diffusion and Solubility Measurements in Room Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2006, 45, 445-450.	1.8	208
27	Separation of light gas mixtures using SAPO-34 membranes. AICHE Journal, 2000, 46, 779-789.	1.8	200
28	Perspectives on mixed matrix membranes. Journal of Membrane Science, 2011, 378, 393-397.	4.1	200
29	Ceramic-zeolite composite membranes and their application for separation of vapor/gas mixtures. Journal of Membrane Science, 1994, 90, 1-10.	4.1	199
30	Zeolite Membranes: Microstructure Characterization and Permeation Mechanisms. Accounts of Chemical Research, 2011, 44, 1196-1206.	7.6	184
31	Scalable Fabrication of Polymer Membranes with Vertically Aligned 1 nm Pores by Magnetic Field Directed Self-Assembly. ACS Nano, 2014, 8, 11977-11986.	7.3	183
32	Poly(ionic liquid)/Ionic Liquid Ion-Gels with High â€œFreeâ€• Ionic Liquid Content: Platform Membrane Materials for CO₂/Light Gas Separations. Accounts of Chemical Research, 2016, 49, 724-732.	7.6	182
33	High-Pressure CO2/CH4 Separation Using SAPO-34 Membranes. Industrial & Engineering Chemistry Research, 2005, 44, 3220-3228.	1.8	180
34	Interpretation of CO₂ Solubility and Selectivity in Nitrile-Functionalized Room-Temperature Ionic Liquids Using a Group Contribution Approach. Industrial & Engineering Chemistry Research, 2008, 47, 7005-7012.	1.8	179
35	Novel mixed matrix membranes based on polymerizable room-temperature ionic liquids and SAPO-34 particles to improve CO2 separation. Journal of Membrane Science, 2011, 370, 141-148.	4.1	179
36	Permeation of Aromatic Hydrocarbon Vapors through Silicaliteâ^’Zeolite Membranes. The Journal of Physical Chemistry, 1996, 100, 7676-7679.	2.9	178

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37	Ideal Gas Solubilities and Solubility Selectivities in a Binary Mixture of Room-Temperature Ionic Liquids. Journal of Physical Chemistry B, 2008, 112, 2335-2339.	1.2	170
38	Synthesis and Permeation Properties of SAPO-34 Tubular Membranes. Industrial & Engineering Chemistry Research, 1998, 37, 3924-3929.	1.8	166
39	Synthesis and Separation Performance of SSZ-13 Zeolite Membranes on Tubular Supports. Chemistry of Materials, 2002, 14, 3458-3464.	3.2	163
40	Separations of Cyclic, Branched, and Linear Hydrocarbon Mixtures through Silicalite Membranes. Industrial & Engineering Chemistry Research, 1997, 36, 137-143.	1.8	162
41	Temperature and pressure effects on CO2 and CH4 permeation through MFI zeolite membranes. Journal of Membrane Science, 1999, 160, 115-125.	4.1	160
42	A three-component mixed-matrix membrane with enhanced CO2 separation properties based on zeolites and ionic liquid materials. Journal of Membrane Science, 2010, 350, 117-123.	4.1	159
43	Separations of C4and C6Isomers in ZSM-5 Tubular Membranes. Industrial & Engineering Chemistry Research, 1998, 37, 166-176.	1.8	157
44	Generalized microscopic mechanism of facilitated transport in fixed site carrier membranes. Journal of Membrane Science, 1992, 75, 121-129.	4.1	153
45	Preparation and separation properties of silicalite composite membranes. Journal of Membrane Science, 1995, 105, 79-87.	4.1	151
46	Liquid membrane transport: a survey. Journal of Membrane Science, 1982, 12, 239-259.	4.1	148
47	Hydrogen purification using a SAPO-34 membrane. Journal of Membrane Science, 2008, 307, 277-283.	4.1	145
48	Synthesis and light gas separations in cross-linked gemini room temperature ionic liquid polymer membranes. Journal of Membrane Science, 2008, 316, 186-191.	4.1	143
49	Effect of Anion on Gas Separation Performance of Polymerâˆ'Room-Temperature Ionic Liquid Composite Membranes. Industrial & Engineering Chemistry Research, 2008, 47, 9919-9924.	1.8	143
50	Main-chain imidazolium polymer membranes for CO2 separations: An initial study of a new ionic liquid-inspired platform. Journal of Membrane Science, 2010, 359, 37-43.	4.1	140
51	SAPO-34 membranes for CO2/CH4 separations: Effect of Si/Al ratio. Microporous and Mesoporous Materials, 2008, 110, 310-317.	2.2	139
52	Separation of Hydrocarbon Isomer Vapors with Silicalite Zeolite Membranes. Industrial & Engineering Chemistry Research, 1996, 35, 1575-1582.	1.8	131
53	Influence of propane on CO2/CH4 and N2/CH4 separations in CHA zeolite membranes. Journal of Membrane Science, 2015, 473, 201-209.	4.1	130
54	Ideal CO₂/Light Gas Separation Performance of Poly(vinylimidazolium) Membranes and Poly(vinylimidazolium)-Ionic Liquid Composite Films. Industrial & Engineering Chemistry Research, 2013, 52, 1023-1032.	1.8	124

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55	Modification of Zeolite Membranes for H2Separation by Catalytic Cracking of Methyldiethoxysilane. Industrial & Engineering Chemistry Research, 2005, 44, 4035-4041.	1.8	121
56	Effect of â€œFreeâ€•Cation Substituent on Gas Separation Performance of Polymerâˆ’Room-Temperature Ionic Liquid Composite Membranes. Industrial & Engineering Chemistry Research, 2009, 48, 4607-4610.	1.8	120
57	H₂ Separation Using Defect-Free, Inorganic Composite Membranes. Journal of the American Chemical Society, 2011, 133, 1748-1750.	6.6	117
58	Characterization of SAPO-34 membranes by water adsorption. Journal of Membrane Science, 2001, 186, 25-40.	4.1	116
59	Pervaporation of organic/water mixtures through B-ZSM-5 zeolite membranes on monolith supports. Journal of Membrane Science, 2003, 215, 235-247.	4.1	115
60	Properties and separation performance of Ge-ZSM-5 membranes. Microporous and Mesoporous Materials, 2003, 58, 137-154.	2.2	114
61	Physically Gelled Ionic Liquids: Solid Membrane Materials with Liquidlike CO₂ Gas Transport. Chemistry of Materials, 2009, 21, 3027-3029.	3.2	114
62	Improving SAPO-34 membrane synthesis. Journal of Membrane Science, 2013, 444, 384-393.	4.1	111
63	Polymerized Lyotropic Liquid Crystal Assemblies for Membrane Applications. Macromolecular Rapid Communications, 2008, 29, 367-389.	2.0	106
64	Aromatic Permeation through Crystalline Molecular Sieve Membranes. Industrial & Engineering Chemistry Research, 2001, 40, 565-577.	1.8	104
65	Separating organics from water by pervaporation with isomorphously-substituted MFI zeolite membranes. Journal of Membrane Science, 2002, 196, 111-123.	4.1	101
66	CO2/light gas separation performance of cross-linked poly(vinylimidazolium) gel membranes as a function of ionic liquid loading and cross-linker content. Journal of Membrane Science, 2012, 397-398, 24-37.	4.1	100
67	Driving force for pervaporation through zeolite membranes. Journal of Membrane Science, 2003, 225, 165-176.	4.1	99
68	Scale-up of SAPO-34 membranes for CO2/CH4 separation. Journal of Membrane Science, 2010, 352, 7-13.	4.1	97
69	Analysis of facilitated transport with fixed site carrier membranes. Journal of Membrane Science, 1990, 50, 207-214.	4.1	95
70	Pervaporation of Water/THF Mixtures Using Zeolite Membranes. Industrial & Engineering Chemistry Research, 2001, 40, 4577-4585.	1.8	95
71	Thin Polymer Films with Continuous Vertically Aligned 1 nm Pores Fabricated by Soft Confinement. ACS Nano, 2016, 10, 150-158.	7.3	92
72	Separation of Hexane Isomers through Nonzeolite Pores in ZSM-5 Zeolite Membranes. Industrial & Engineering Chemistry Research, 1999, 38, 2775-2781.	1.8	86

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73	Template removal from SAPO-34 crystals and membranes. Journal of Membrane Science, 2010, 363, 29-35.	4.1	85
74	Design methodology for a membrane/distillation column hybrid process. Journal of Membrane Science, 1995, 99, 259-272.	4.1	83
75	Separation of C6 isomers by vapor permeation and pervaporation through ZSM-5 membranes. Journal of Membrane Science, 2000, 176, 43-53.	4.1	83
76	Concentration polarization in SAPO-34 membranes at high pressures. Journal of Membrane Science, 2009, 335, 32-36.	4.1	83
77	Transport Properties of Carbon Dioxide through Amine Functionalized Carrier Membranes. Industrial & Engineering Chemistry Research, 1995, 34, 4071-4077.	1.8	82
78	Isomorphous substitution of Al, Fe, B, and Ge into MFI-zeolite membranes. Microporous and Mesoporous Materials, 2000, 41, 269-280.	2.2	82
79	Supported Ionic Liquid Membranes and Facilitated Ionic Liquid Membranes. ACS Symposium Series, 2002, , 69-87.	0.5	80
80	Interpreting Unary, Binary, and Ternary Mixture Permeation Across a SAPO-34 Membrane with Loading-Dependent Maxwellâˆ’Stefan Diffusivities. Journal of Physical Chemistry C, 2007, 111, 5075-5082.	1.5	80
81	Glycerol-Based Bicontinuous Cubic Lyotropic Liquid Crystal Monomer System for the Fabrication of Thin-Film Membranes with Uniform Nanopores. Chemistry of Materials, 2012, 24, 4005-4007.	3.2	80
82	Modeling Permeation of CO2/CH4, CO2/N2, and N2/CH4Mixtures Across SAPO-34 Membrane with the Maxwellâˆ’Stefan Equations. Industrial & Engineering Chemistry Research, 2007, 46, 3904-3911.	1.8	79
83	How do polymerized room-temperature ionic liquid membranes plasticize during high pressure CO2 permeation?. Journal of Membrane Science, 2010, 360, 202-209.	4.1	79
84	Microwave-assisted syntheses of highly CO₂-selective organic cage frameworks (OCFs). Chemical Science, 2012, 3, 874-877.	3.7	78
85	Separations Research Needs for the 21st Century. Industrial & Engineering Chemistry Research, 2005, 44, 2887-2892.	1.8	75
86	Ion-exchanged SAPO-34 membranes for light gas separations. Microporous and Mesoporous Materials, 2007, 106, 140-146.	2.2	75
87	Phosphonium-based poly(Ionic liquid) membranes: The effect of cation alkyl chain length on light gas separation properties and Ionic conductivity. Journal of Membrane Science, 2016, 498, 408-413.	4.1	74
88	Alkali-Free ZSM-5 Membranes:Â Preparation Conditions and Separation Performance. Industrial & Engineering Chemistry Research, 1999, 38, 3635-3646.	1.8	73
89	Nanoporous, Bicontinuous Cubic Lyotropic Liquid Crystal Networks via Polymerizable Gemini Ammonium Surfactants. Chemistry of Materials, 2010, 22, 4525-4527.	3.2	73
90	Facile fabrication of CO2 separation membranes by cross-linking of poly(ethylene glycol) diglycidyl ether with a diamine and a polyamine-based ionic liquid. Journal of Membrane Science, 2017, 523, 551-560.	4.1	72

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91	Role of conditioning on water uptake and hydraulic permeability of NafionÂ® membranes. Journal of Membrane Science, 2006, 279, 521-528.	4.1	71
92	Separation of 1,3-propanediol from glycerol and glucose using a ZSM-5 zeolite membrane. Journal of Membrane Science, 2001, 191, 53-59.	4.1	69
93	MTBE Adsorption on All-Silica Î² Zeolite. Environmental Science & Technology, 2003, 37, 4007-4010.	4.6	69
94	Seeded-gel synthesis of SAPO-34 single channel and monolith membranes, for CO2/CH4 separations. Journal of Membrane Science, 2012, 415-416, 770-775.	4.1	68
95	CO2/CH4 separation performance of ionic-liquid-based epoxy-amine ion gel membranes under mixed feed conditions relevant to biogas processing. Journal of Membrane Science, 2017, 528, 64-71.	4.1	68
96	Separation of 1,3-Propanediol from Aqueous Solutions Using Pervaporation through an X-type Zeolite Membrane. Industrial & Engineering Chemistry Research, 2001, 40, 1952-1959.	1.8	67
97	In Situ Crystallization of Beta Zeolite Membranes and Their Permeation and Separation Properties. Chemistry of Materials, 2002, 14, 489-492.	3.2	66
98	New protein-resistant coatings for water filtration membranes based on quaternary ammonium and phosphonium polymers. Journal of Membrane Science, 2009, 330, 104-116.	4.1	65
99	Transport mechanism of carbon dioxide through perfluorosulfonate ionomer membranes containing an amine carrier. Chemical Engineering Science, 1996, 51, 4781-4789.	1.9	64
100	Blocking defects in SAPO-34 membranes with cyclodextrin. Journal of Membrane Science, 2010, 358, 7-12.	4.1	64
101	X-type zeolite membranes: preparation, characterization, and pervaporation performance. Microporous and Mesoporous Materials, 2002, 53, 59-70.	2.2	63
102	High-Permeance Room-Temperature Ionic-Liquid-Based Membranes for CO₂/N₂ Separation. Industrial & Engineering Chemistry Research, 2014, 53, 20064-20067.	1.8	63
103	Determination and optimization of factors affecting CO2/CH4 separation performance in poly(ionic) Tj ETQq1 1 0.784314 rgBT /Overlo	4.1	62
104	Facilitated transport mechanism in fixed site carrier membranes. Journal of Membrane Science, 1991, 60, 297-306.	4.1	61
105	Experimental configuration and adsorption effects on the permeation of C4 isomers through ZSM-5 zeolite membranes. Journal of Membrane Science, 2000, 173, 35-52.	4.1	61
106	Cross-linked ionic resins and gels from epoxide-functionalized imidazolium ionic liquid monomers. Polymer, 2014, 55, 3305-3313.	1.8	61
107	Transient measurements of adsorption and diffusion in H-ZSM-5 membranes. AIChE Journal, 2002, 48, 1155-1167.	1.8	59
108	Gas permeation properties of ion-exchanged ZSM-5 zeolite membranes. Microporous and Mesoporous Materials, 2000, 39, 485-492.	2.2	57

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109	Water filtration performance of a lyotropic liquid crystal polymer membrane with uniform, sub-1-nm pores. Journal of Membrane Science, 2011, 366, 62-72.	4.1	57
110	High catalytic efficiency of palladium nanoparticles immobilized in a polymer membrane containing poly(ionic liquid) in Suzukiâ€“Miyaura cross-coupling reaction. Journal of Membrane Science, 2015, 492, 331-339.	4.1	57
111	A Ge-Substituted ZSM-5 Zeolite Membrane for the Separation of Acetic Acid from Water. Industrial & Engineering Chemistry Research, 2001, 40, 6165-6171.	1.8	56
112	Comparing atomistic simulations and experimental measurements for CH4/CF4 mixture permeation through silicalite membranes. Journal of Membrane Science, 2003, 227, 123-136.	4.1	56
113	Adsorption of CO₂, CH₄, C₃H₈, and H₂O in SSZ-13, SAPO-34, and T-Type Zeolites. Industrial & Engineering Chemistry Research, 2016, 55, 9749-9757.	1.8	56
114	Facilitated transport separation of benzene and cyclohexane with poly(vinyl alcohol)-AgNO3 membranes. Journal of Membrane Science, 1997, 127, 161-170.	4.1	55
115	Separation of close-boiling hydrocarbons with silicalite zeolite membranes. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 2499.	1.7	54
116	High selectivities in defective MFI membranes. Journal of Membrane Science, 2008, 321, 309-315.	4.1	54
117	Separation of methyl ethyl ketone from water by pervaporation using a silicalite membrane. Journal of Membrane Science, 1996, 114, 127-130.	4.1	53
118	Boron-substituted ZSM-5 membranes: Preparation and separation performance. AICHE Journal, 2000, 46, 1201-1208.	1.8	53
119	Separation of binary C5 and C6 hydrocarbon mixtures through MFI zeolite membranes. Journal of Membrane Science, 2006, 269, 171-176.	4.1	52
120	Fixed-site-carrier facilitated transport of carbon dioxide through ionic-liquid-based epoxy-amine ion gel membranes. Journal of Membrane Science, 2015, 492, 303-311.	4.1	52
121	Analysis of a membrane/distillation column hydrid process. Journal of Membrane Science, 1994, 93, 31-44.	4.1	51
122	Olefin separation using silver impregnated ion-exchange membranes and silver salt/polymer blend membranes. Journal of Membrane Science, 1996, 117, 151-161.	4.1	51
123	Parallel Pathways for Transport in ZSM-5 Zeolite Membranes. Chemistry of Materials, 1998, 10, 3716-3723.	3.2	51
124	Effects of Zeolite Membrane Structure on the Separation of 1,3-Propanediol from Glycerol and Glucose by Pervaporation. Chemistry of Materials, 2001, 13, 1865-1873.	3.2	51
125	A Comparison of Atomistic Simulations and Experimental Measurements of Light Gas Permeation through Zeolite Membranes. Industrial & Engineering Chemistry Research, 2002, 41, 1641-1650.	1.8	51
126	Influence of nanostructure on light gas separations in cross-linked lyotropic liquid crystal membranes. Journal of Membrane Science, 2007, 288, 13-19.	4.1	51

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127	Thermotropic liquid crystal behaviour of gemini imidazolium-based ionic amphiphiles. Liquid Crystals, 2010, 37, 1587-1599.	0.9	50
128	Physically Gelled Room-Temperature Ionic Liquid-Based Composite Membranes for CO₂/N₂ Separation: Effect of Composition and Thickness on Membrane Properties and Performance. Industrial & Engineering Chemistry Research, 2013, 52, 8812-8821.	1.8	49
129	A comparison of fluoroalkyl-derivatized imidazolium:TFSI and alkyl-derivatized imidazolium:TFSI ionic liquids: a molecular dynamics simulation study. Physical Chemistry Chemical Physics, 2010, 12, 7064.	1.3	48
130	Influence of zeolite crystal expansion/contraction on NaA zeolite membrane separations. Journal of Membrane Science, 2011, 366, 413-420.	4.1	48
131	Silicalite-1 zeolite composite membranes. Catalysis Today, 1995, 25, 209-212.	2.2	47
132	Synthesis and separation properties of B-ZSM-5 zeolite membranes on monolith supports. Journal of Membrane Science, 2002, 210, 113-127.	4.1	47
133	Effect of composition and nanostructure on CO2/N2 transport properties of supported alkyl-imidazolium block copolymer membranes. Journal of Membrane Science, 2013, 430, 312-320.	4.1	47
134	Competitive facilitated transport of acid gases in perfluorosulfonic acid membranes. Journal of Membrane Science, 1989, 46, 309-324.	4.1	46
135	Flexible nanostructure of MFI zeolite membranes. Journal of Membrane Science, 2007, 298, 182-189.	4.1	46
136	Investigation of slowing-down and speeding-up effects in binary mixture permeation across SAPO-34 and MFI membranes. Separation and Purification Technology, 2008, 60, 230-236.	3.9	46
137	Separating molecules by size in SAPO-34 membranes. Journal of Membrane Science, 2014, 456, 185-191.	4.1	46
138	Vinyl-Functionalized Poly(imidazolium)s: A Curable Polymer Platform for Cross-Linked Ionic Liquid Gel Synthesis. Chemistry of Materials, 2014, 26, 1294-1296.	3.2	44
139	Influence of adsorbed molecules on the permeation properties of silicalite membranes. Journal of Membrane Science, 1997, 129, 77-82.	4.1	43
140	Spatially resolved gas permeation through SAPO-34 membranes. Journal of Membrane Science, 2012, 409-410, 212-221.	4.1	43
141	Transport of C6 isomers through ZSM-5 zeolite membranes. Journal of Membrane Science, 2003, 224, 51-67.	4.1	41
142	Gated Ion Transport through Dense Carbon Nanotube Membranes. Journal of the American Chemical Society, 2010, 132, 8285-8290.	6.6	40
143	PillarÂ[5]arene/Matrimidâ„¢ materials for high-performance methane purification membranes. Journal of Membrane Science, 2017, 539, 224-228.	4.1	40
144	Imidazolium-containing, hydrophobicâ€"ionicâ€"hydrophilic ABC triblock copolymers: synthesis, ordered phase-separation, and supported membrane fabrication. Soft Matter, 2013, 9, 7923.	1.2	39

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145	Effect of Monomer Structure on Curing Behavior, CO₂ Solubility, and Gas Permeability of Ionic Liquid-Based Epoxyâ€“Amine Resins and Ion-Gels. Industrial & Engineering Chemistry Research, 2015, 54, 4396-4406.	1.8	39
146	Electrochemistry, Stability, and Alkene Complexation Chemistry of Copper(I) Triflate in Aqueous Solution. Potential for Use in Electrochemically Modulated Complexation-Based Separation Processes. Inorganic Chemistry, 1997, 36, 136-140.	1.9	38
147	(Cross-Linked Poly(Ionic Liquid)â€“Ionic Liquidâ€“Zeolite) Mixed-Matrix Membranes for CO₂/CH₄ Gas Separations Based on Curable Ionic Liquid Prepolymers. Industrial & Engineering Chemistry Research, 2019, 58, 4704-4708.	1.8	38
148	Measurements of diffusion through a zeolite membrane using isotopic-transient pervaporation. Microporous and Mesoporous Materials, 2004, 71, 199-210.	2.2	37
149	Adsorption of Liquid Mixtures on Silicalite-1 Zeolite:Â A Density-Bottle Method. Langmuir, 2005, 21, 7390-7397.	1.6	37
150	ZSM-11 membranes: Characterization and pervaporation performance. AIChE Journal, 2002, 48, 269-278.	1.8	36
151	2,2-Dimethylbutane adsorption and diffusion in MFI zeolite. Microporous and Mesoporous Materials, 2008, 111, 24-31.	2.2	34
152	Application of a lyotropic liquid crystal nanofiltration membrane for hydraulic fracturing flowback water: Selectivity and implications for treatment. Journal of Membrane Science, 2017, 543, 319-327.	4.1	34
153	Single crystal texture by directed molecular self-assembly along dual axes. Nature Materials, 2019, 18, 1235-1243.	13.3	34
154	Low Heat of Adsorption of Ethylene Achieved by Major Solidâ€State Structural Rearrangement of a Discrete Copper(I) Complex. Angewandte Chemie - International Edition, 2018, 57, 16442-16446.	7.2	33
155	Preparation and pervaporation properties of a MEL-type zeolite membrane. Chemical Communications, 2001, , 583-584.	2.2	32
156	Adsorption and Diffusion Properties of Butanes in ZSM-5 Zeolite Membranes. Industrial & Engineering Chemistry Research, 2002, 41, 4094-4105.	1.8	32
157	Adsorption of benzene mixtures on silicalite-1 and NaX zeolites. Microporous and Mesoporous Materials, 2006, 96, 376-385.	2.2	32
158	Competitive facilitated transport through liquid membranes. Journal of Membrane Science, 1985, 23, 183-198.	4.1	30
159	Modeling transient permeation of polar organic mixtures through a MFI zeolite membrane using the Maxwellâ€“Stefan equations. Journal of Membrane Science, 2007, 293, 167-173.	4.1	30
160	Thin-film composite bicontinuous cubic lyotropic liquid crystal polymer membranes: Effects of anion-exchange on water filtration performance. Journal of Membrane Science, 2014, 455, 143-151.	4.1	30
161	Imidazoliumâ€Based Poly(ionic liquid)/Ionic Liquid Ionâ€Gels with High Ionic Conductivity Prepared from a Curable Poly(ionic liquid). Macromolecular Rapid Communications, 2016, 37, 1150-1154.	2.0	30
162	Adsorbate-Induced Expansion of Silicalite-1 Crystals. Industrial & Engineering Chemistry Research, 2008, 47, 9611-9616.	1.8	28

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163	Adsorption-induced expansion of defects in MFI membranes. Journal of Membrane Science, 2009, 341, 238-245.	4.1	28
164	A silver(i) coordinated phenanthroline-based polymer with high ethylene/ethane adsorption selectivity. Chemical Communications, 2014, 50, 5745.	2.2	27
165	Analysis of transient permeation fluxes into and out of membranes for adsorption measurements. Chemical Engineering Science, 2003, 58, 2103-2112.	1.9	26
166	Measurement of sorption and diffusion in nonporous membranes by transient permeation experiments. Journal of Membrane Science, 2007, 287, 111-118.	4.1	26
167	Transient permeation of butanes through ZSM-5 and ZSM-11 zeolite membranes. AICHE Journal, 2004, 50, 2816-2834.	1.8	25
168	Characterizing Nonzeolitic Pores in MFI Membranes. Industrial & Engineering Chemistry Research, 2008, 47, 3943-3948.	1.8	25
169	Influence of crystal expansion/contraction on zeolite membrane permeation. Journal of Membrane Science, 2010, 357, 98-104.	4.1	25
170	A thermoresponsive poly(ionic liquid) membrane enables concentration of proteins from aqueous media. Chemical Communications, 2016, 52, 7497-7500.	2.2	25
171	Effect of post-polymerization anion-exchange on the rejection of uncharged aqueous solutes in nanoporous, ionic, lyotropic liquid crystal polymer membranes. Journal of Membrane Science, 2017, 529, 72-79.	4.1	25
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