

CITATION REPORT

List of articles citing

Correlation of separation factor versus permeability for polymeric membranes

DOI: 10.1016/0376-7388(91)80060-j
Journal of Membrane Science, 1991, 62, 165-185.

Source: <https://exaly.com/paper-pdf/22407643/citation-report.pdf>

Version: 2024-04-28

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
2266	Developments in air separation. 1991 , 5, 83-94		22
2265	Preparation of composite membranes by a spin coating process. <i>Journal of Membrane Science</i> , 1992 , 74, 233-252	9.6	57
2264	Membrane-based gas separation. <i>Journal of Membrane Science</i> , 1993 , 83, 1-80	9.6	956
2263	Polymeric Gas Separation Membrances. 1994 , 6, 269-279		19
2262	Modification of asymmetric polysulfone membranes by mild surface fluorination Part I. Transport properties. <i>Journal of Membrane Science</i> , 1994 , 94, 121-141	9.6	39
2261	Development of a defect-free 6FDA-durene asymmetric hollow fiber and its composite hollow fibers. <i>Journal of Membrane Science</i> , 1994 , 88, 21-36	9.6	69
2260	Selectivity enhancement via photooxidative surface modification of polyimide air separation membranes. <i>Journal of Membrane Science</i> , 1994 , 94, 195-212	9.6	25
2259	Investigation of the gas-transport properties of polyaniline. <i>Journal of Membrane Science</i> , 1994 , 91, 1-12	9.6	70
2258	Polymers for gas separations: the next decade. <i>Journal of Membrane Science</i> , 1994 , 94, 1-65	9.6	787
2257	Surface fluorination of poly (phenylene oxide) composite membranes Part I. Transport properties. <i>Journal of Membrane Science</i> , 1994 , 90, 21-35	9.6	35
2256	Analysis of a thermally stable polypyrrolone for high temperature membrane-based gas separations. <i>Journal of Membrane Science</i> , 1994 , 90, 117-130	9.6	27
2255	Gas-transport properties of sulfonated polystyrenes. <i>Journal of Membrane Science</i> , 1994 , 95, 51-61	9.6	39
2254	Poly(ether imide)s with hindering substituents in the anhydride moiety: synthesis, properties and gas permeabilities. 1994 , 35, 4215-4227		30
2253	High performance polymers for membrane separation. 1994 , 35, 4970-4978		222
2252	Effects of Trifluoromethyl Side Groups on Gas Permeability and Permselectivity in Polyimides. 1994 , 26, 1186-1189		26
2251	The Effects of CO ₂ -Conditioning of Polymers on Positron Annihilation and Gas Permeation Properties. 1995 , 68, 3011-3017		12
2250	Design studies of membrane permeator processes for gas separation. 1995 , 9, 151-169		18

2249	Gas separation by silicone-coated dry asymmetric aromatic polyamide membranes. 1995 , 9, 181-187		12
2248	Gas separation properties of aromatic polyamides with sulfone groups. 1995 , 36, 793-800		49
2247	Poly(p-substituted phenylacetylene) with perfluoroalkoxydimethylsilyl side groups for oxygen and ethanol permselective membrane. 1995 , 34, 133-140		11
2246	Novel highly permselective 6F-poly(amide-imide)s as membrane host for nano-sized catalysts. <i>Journal of Membrane Science</i> , 1995 , 99, 29-38	9.6	68
2245	Analysis of mass transfer in composite materials with irregular interfaces. <i>Journal of Membrane Science</i> , 1995 , 103, 1-10	9.6	1
2244	New facilitated transport membranes for the separation of carbon dioxide from hydrogen and methane. <i>Journal of Membrane Science</i> , 1995 , 104, 139-146	9.6	104
2243	Gas separation properties of aromatic polyamides containing hexafluoroisopropylidene groups. <i>Journal of Membrane Science</i> , 1995 , 104, 231-241	9.6	63
2242	Organic Template Approach to molecular sieving silica membranes. <i>Journal of Membrane Science</i> , 1995 , 105, 273-279	9.6	187
2241	Catalysis with homogeneous membranes loaded with nanoscale metallic clusters and their preparation. 1995 , 25, 277-283		34
2240	Gas transport properties of adamantane-based polysulfones. 1995 , 36, 3165-3172		94
2239	Separation of Ethane/Ethylene and Propane/Propylene Systems with a Carbonized BPDA/pPDA Polyimide Membrane. 1996 , 35, 4176-4181		135
2238	Significance of Entropic Selectivity for Advanced Gas Separation Membranes. 1996 , 35, 1231-1234		179
2237	Highly Oxygen Permselective Membrane of Cobalt-Complexed Polyazomethine Containing Tridentate Ligand and Oligosiloxane in the Repeating Pairs of the Main Chain. 1996 , 28, 106-112		6
2236	Membrane separation process analysis and design strategies based on thermodynamic efficiency of permeation. 1996 , 51, 365-385		22
2235	Effects of colloidal silica incorporation on oxygen/nitrogen separation properties of ceramic-supported 6FDA-IPDA thin films. <i>Journal of Membrane Science</i> , 1996 , 111, 283-290	9.6	34
2234	Gas separation membrane cascades II. Two-compressor cascades. <i>Journal of Membrane Science</i> , 1996 , 112, 129-146	9.6	27
2233	Preparation and characterization of silica/polyimide composite membranes coated on porous tubes for CO ₂ separation. <i>Journal of Membrane Science</i> , 1996 , 115, 65-75	9.6	108
2232	Synthesis and gas permeation properties of poly(4-methyl-2-pentyne). <i>Journal of Membrane Science</i> , 1996 , 121, 243-250	9.6	145

2231	Polytrimethylsilylpropyne Gas Separation Membranes Modified by Radiochemical Grafting of Divinylbenzene. 1996 , 31, 349-363		3
2230	Pore Structure and Permeance of Amorphous Si-C-O Membranes with High Durability at Elevated Temperature. 1997 , 32, 1233-1254		32
2229	Polyarylate gas separation membranes. 1997 , 118, 401-406		2
2228	Unusual Gas-Transport Selectivity in a Partially Oxidized Form of the Conductive Polymer Polypyrrole. 1997 , 9, 560-566		35
2227	Effect of Oxidation on Gas Permeation of Carbon Molecular Sieving Membranes Based on BPDA-ppODA Polyimide. 1997 , 36, 2134-2140		74
2226	Gas Separation Membranes Prepared by Styrene-Grafted Polytrimethylsilylpropyne. 1997 , 32, 2335-2347		2
2225	MEMBRANE SEPARATION TECHNOLOGIES: CURRENT DEVELOPMENTS. 1997 , 157, 145-184		90
2224	Thermodynamic Efficiency, Process Flow-Sheet Design, and Membrane Selection in Membrane Gas Separation. 1997 , 36, 3126-3139		
2223	Gas transport properties of poly(phenylene thioether imide)s. 1997 , 38, 1573-1580		28
2222	Gas sorption and transport in UV-irradiated polyarylate copolymers based on tetramethyl bisphenol-A and dihydroxybenzophenone. <i>Journal of Membrane Science</i> , 1997 , 124, 161-174	9.6	41
2221	Pore size control of carbonized BPDA-ppODA polyimide membrane by chemical vapor deposition of carbon. <i>Journal of Membrane Science</i> , 1997 , 124, 243-251	9.6	124
2220	The limitations of using Flory-Huggins equation for the states of solutions during asymmetric hollow-fiber formation. <i>Journal of Membrane Science</i> , 1997 , 126, 19-34	9.6	86
2219	High transport parameters and free volume of perfluorodioxole copolymers. <i>Journal of Membrane Science</i> , 1997 , 126, 123-132	9.6	146
2218	Carbon molecular sieve membrane formed by oxidative carbonization of a copolyimide film coated on a porous support tube. <i>Journal of Membrane Science</i> , 1997 , 133, 195-205	9.6	70
2217	Poly(amide-imide)/TiO ₂ nano-composite gas separation membranes: Fabrication and characterization. <i>Journal of Membrane Science</i> , 1997 , 135, 65-79	9.6	183
2216	Transport properties of crosslinkable polyimide blends. <i>Journal of Membrane Science</i> , 1997 , 136, 249-259	9.6	58
2215	Tailoring mixed matrix composite membranes for gas separations. <i>Journal of Membrane Science</i> , 1997 , 137, 145-154	9.6	470
2214	Gas sorption and transport in poly(tertiary-butyl methacrylate). 1997 , 38, 1871-1878		26

2213	Polymermembranen zur Gastrennung. 1998 , 110, 3128-3143		10
2212	Gas Separation with Polymer Membranes. 1998 , 37, 2960-2974		172
2211	Study on the morphology and permeation property of amine group-contained polyurethanes. 1998 , 39, 3355-3364		24
2210	Characterization of the transport properties of microporous inorganic membranes. <i>Journal of Membrane Science</i> , 1998 , 140, 81-95	9.6	38
2209	The gas transport properties of amine-containing polyurethane and poly(urethane-urea) membranes. <i>Journal of Membrane Science</i> , 1998 , 141, 91-99	9.6	43
2208	Gas permeabilities of polymers with indan groups in the main chain.. <i>Journal of Membrane Science</i> , 1998 , 143, 105-113	9.6	17
2207	Gas permeabilities of polymers with indan groups in the main chain.. <i>Journal of Membrane Science</i> , 1998 , 143, 115-123	9.6	31
2206	Development and characterization of homogeneous membranes de from high molecular weight sulfonated polyphenylene oxide. <i>Journal of Membrane Science</i> , 1998 , 146, 263-275	9.6	90
2205	Preparation of silicaalumina composite membranes for hydrogen separation by multi-step pore modifications. <i>Journal of Membrane Science</i> , 1998 , 147, 147-158	9.6	19
2204	Membranes in Chemical Processing a Review of Applications and Novel Developments. 1998 , 27, 51-168		38
2203	Ion Beam Irradiation An Efficient Method to Modify the Subnanometer Scale Microstructure of Polymers in a Controlled Way. 1998 , 540, 255		7
2202	Effects of bromine substitution on the physical and gas transport properties of five series of glassy polymers. 1999 , 40, 3367-3382		22
2201	Comparison of gas transport and sorption in the ladder polymer BBL and some semi-ladder polymers. 1999 , 40, 5655-5664		39
2200	Gas separation properties of pendent phenyl substituted aromatic polyamides containing sulfone and hexafluoroisopropylidene groups. 1999 , 40, 5715-5722		39
2199	Effect of UV crosslinking and physical aging on the gas permeability of thin glassy polyarylate films. 1999 , 40, 7209-7225		81
2198	Separation of CO ₂ and CH ₄ through two types of polyimide membrane. 1999 , 340, 106-109		17
2197	Improvement of CO ₂ /CH ₄ separation characteristics of polyimides by chemical crosslinking. <i>Journal of Membrane Science</i> , 1999 , 155, 145-154	9.6	316
2196	OrganicInorganic membranes prepared from polyether diamine and epoxy silane. <i>Journal of Membrane Science</i> , 1999 , 159, 197-207	9.6	106

2195	Permeation properties to CO ₂ and N ₂ of poly(ethylene oxide)-containing and crosslinked polymer films. <i>Journal of Membrane Science</i> , 1999 , 160, 87-99	9.6	148
2194	Supported carbon molecular sieve membranes based on a phenolic resin. <i>Journal of Membrane Science</i> , 1999 , 160, 201-211	9.6	186
2193	Progress in zeolitic membranes. 1999 , 9, 113-122		25
2192	Basis of Permeability/Selectivity Tradeoff Relations in Polymeric Gas Separation Membranes. 1999 , 32, 375-380		1149
2191	Preparations of metal impregnated porous inorganic membranes for hydrogen separation by multi-step pore modifications. 1999 , 16, 180-186		8
2190	Preliminary investigation of gas transport mechanism in a H ⁺ irradiated polyimide-ceramic composite membrane. 1999 , 152, 325-334		21
2189	Possible air separations with superconducting membranes. 1999 , 45, 2313-2325		8
2188	Incorporation of fluorinated surfactants into polysulfone films and asymmetric gas separation membranes. 1999 , 71, 163-175		4
2187	Gas permeability and permselectivity of polyimides prepared from phenylenediamines with methyl substitution at the ortho position. 1999 , 48, 832-836		24
2186	Polypyrrolones for membrane gas separations. I. Structural comparison of gas transport and sorption properties. 1999 , 37, 1235-1249		82
2185	Interrelation between phase state and gas permeation in polysulfone/polyimide blend membranes. 1999 , 37, 2788-2798		33
2184	Synthesis and characterization of poly[4,4-bis(pivaloxymethyl)-1,6-heptadiyne] having high oxygen permselectivity. 1999 , 37, 4135-4139		1
2183	Molecular Dynamics Simulation of Penetrant Transport in Organic/Inorganic Composite Membrane Materials. 1999 , 58-65		1
2182	Ultrasonic deposition of high-selectivity nanoporous carbon membranes. 1999 , 285, 1902-5		304
2181	Polymer membranes for gas separation. 1999 , 4, 549-552		214
2180	Mixed matrix membranes: Important and challenging!. 1999 , 1999, 6-8		8
2179	Entropic Selectivity Analysis of a Series of Polypyrrolones for Gas Separation Membranes. 1999 , 32, 3341-3346	32	
2178	Synthesis and Characterization of Poly[[1,1Biphenyl]-4,4Diyl[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]]. 1999 , 32, 6418-6424		17

2177	Water vapor sorption and diffusion in glassy polymers. 1999 , 138, 13-20		12
2176	Surface modification of polyimide and polysulfone membranes by ion beam for gas separation. 2000 , 75, 1554-1560		40
2175	Synthesis and gas transport properties of random amide imide copolymers. 2000 , 38, 1951-1965		10
2174	Effects of polymer molecular weight and chemical modification on the gas transport properties of poly(2,6-dimethyl-1,4-phenylene oxide). 2000 , 77, 1137-1143		31
2173	Synthesis, transport, and sorption properties and free volume of polystyrene derivatives containing Si and F. 2000 , 78, 1612-1620		31
2172	Gas transport properties of 6FDA-durene/1,4-phenylenediamine (pPDA) copolyimides. 2000 , 38, 2703-2713		182
2171	The synthesis and characterization of polyimide homopolymers based on 5(6)-amino-1-(4-aminophenyl)-1,3,3-trimethylindane. 2000 , 38, 2840-2854		31
2170	Entropic and energetic selectivity in air separation with microporous materials. 2000 , 46, 99-109		14
2169	Effect of film thickness on the changes in gas permeability of a glassy polyarylate due to physical aging Part I. Experimental observations. 2000 , 41, 629-637		173
2168	Hybrid films of poly(ethylene oxide- b -amide-6) containing sol-gel silicon or titanium oxide as inorganic fillers: effect of morphology and mechanical properties on gas permeability. 2000 , 41, 5461-5470		92
2167	Gas permeability of Langmuir-Blodgett (LB) films: characterisation and application. 2000 , 379, 240-252		15
2166	Permeation of small molecules through polymers confined in mesoporous media. <i>Journal of Membrane Science</i> , 2000 , 171, 239-252	9.6	26
2165	Pushing the limits on possibilities for large scale gas separation: which strategies?. <i>Journal of Membrane Science</i> , 2000 , 175, 181-196	9.6	655
2164	Limitations of a constant pressure-type testing system in determination of gas transport properties of hydrophilic films. <i>Journal of Membrane Science</i> , 2000 , 177, 129-142	9.6	11
2163	Permeation of oxygen/nitrogen in cobalt-chelated copoly(EDTA-MMA-BA) membranes. <i>Journal of Membrane Science</i> , 2000 , 177, 189-199	9.6	7
2162	On the preparation of supported nanoporous carbon membranes. <i>Journal of Membrane Science</i> , 2000 , 179, 275-282	9.6	82
2161	Free volume model and tradeoff relations of gas permeability and selectivity in glassy polymers. <i>Journal of Membrane Science</i> , 2000 , 165, 201-216	9.6	73
2160	Mass transfer in corrugated membranes. <i>Journal of Membrane Science</i> , 2000 , 165, 177-187	9.6	28

2159	Development of the methods for prediction of gas permeation parameters of glassy polymers: polyimides as alternating co-polymers. <i>Journal of Membrane Science</i> , 2000 , 167, 91-106	9.6	50
2158	The effect of shear rates on gas separation performance of 6FDA-durene polyimide hollow fibers. <i>Journal of Membrane Science</i> , 2000 , 167, 55-66	9.6	82
2157	Effect of metal substitution of high molecular weight sulfonated polyphenylene oxide membranes on their gas separation performance. <i>Journal of Membrane Science</i> , 2000 , 167, 203-216	9.6	39
2156	Nanoporous Carbon Membranes for Gas Separation. 2000 , 6, 473-496		7
2155	MEMBRANE SEPARATIONS Gas Separations with Polymer Membranes. 2000 , 1725-1738		2
2154	New Polyimides for Gas Separation. 2. Polyimides Derived from Substituted Catechol Bis(etherphthalic anhydride)s. 2000 , 33, 7127-7135		63
2153	A Molecular Modeling Study of Entropic and Energetic Selectivities in Air Separation with Glassy Polymers. 2000 , 33, 3142-3152		11
2152	Ultrathin, Hyperbranched Poly(acrylic acid) Membranes on Porous Alumina Supports. 2000 , 122, 11670-11678		53
2151	Factors Controlling Successful Formation of Mixed-Matrix Gas Separation Materials. 2000 , 39, 2692-2696		419
2150	Gas Permeability and Free Volume of Highly Branched Substituted Acetylene Polymers. 2001 , 34, 1788-1796		70
2149	Gas Permeability Properties of Polysulfone Membranes Containing the Mesoporous Molecular Sieve MCM-41. 2001 , 13, 2366-2373		171
2148	Polymeric Membranes for Gas Separation. 2001 , 7629-7632		2
2147	Future directions of membrane gas-separation technology. 2001 , 2001, 5-10		58
2146	Gas Permeation Properties of Poly(1,1-dihydroperfluorooctyl acrylate), Poly(1,1-dihydroperfluorooctyl methacrylate), and Poly(styrene)-b-poly(1,1-dihydroperfluorooctyl acrylate) Block Copolymers. 2001 , 34, 5611-5619		27
2145	Facilitated oxygen transport in liquid membranes: review and new concepts. <i>Journal of Membrane Science</i> , 2001 , 181, 97-110	9.6	50
2144	Zeolite-filled polyimide membrane containing 2,4,6-triaminopyrimidine. <i>Journal of Membrane Science</i> , 2001 , 188, 151-163	9.6	211
2143	Characterization of gas transport in selected rubbery amorphous polyphosphazene membranes. <i>Journal of Membrane Science</i> , 2001 , 186, 249-256	9.6	61
2142	Gas permeation properties of poly(amide-6-b-ethylene oxide)/silica hybrid membranes. <i>Journal of Membrane Science</i> , 2001 , 193, 209-225	9.6	336

2141	Gas permeation properties of thianthrene-5,5,10,10-tetraoxide-containing polyimides. 2001 , 42, 2021-2029	29
2140	Membranes for gas separation. 2001 , 26, 853-893	520
2139	Gas transport properties of 6FDA-durene/1,3-phenylenediamine (mPDA) copolyimides. 2001 , 81, 3552-3564	36
2138	Fabrication of 6FDA-durene polyimide asymmetric hollow fibers for gas separation. 2001 , 82, 2166-2173	10
2137	Gas-transport properties in crosslinked polymers. I. Aliphatic polyurethane-acrylate-based adhesives. 2001 , 39, 786-795	12
2136	Poly[1-(trimethylsilyl)-1-propyne] and related polymers: synthesis, properties and functions. 2001 , 26, 721-798	534
2135	Carbon molecular sieve membranes derived from a phenolic resin supported on porous ceramic tubes. 2001 , 25, 379-384	75
2134	Hybrid organic-inorganic membranes. 2001 , 25, 181-193	55
2133	Permeation of wet CO ₂ /CH ₄ mixed gas through a liquid membrane supported on surface of a hydrophobic microporous membrane. 2001 , 24, 235-242	40
2132	Membrane Technology. 2001 ,	7
2131	PURE GAS PERMEABILITIES OF A SERIES OF SUBSTITUTED BISPHENOXY PHOSPHAZENE POLYMERS. 2001 , 36, 1067-1084	2
2130	NONBISPHENOL A POLYCARBONATES*. 2001 , 41, 325-367	2
2129	Ag functionalized Carbon Molecular Sieves membranes for separating O ₂ and N ₂ . 2002 , 752, 1	
2128	The Preparation of Partially Oriented Zeolite Thin Films via Pulsed Laser Ablation. 2002 , 752, 1	
2127	Ion Beam Modification of Matrimid [®] Gas Separation Membrane Evolution in Chemical Structure, Microstructure and Gas Permeation Properties. 2002 , 752, 1	
2126	Preparation and Characterization of Porous Collagen Membranes on Silicon. 2002 , 752, 1	1
2125	Synthesis and Characteristics of Novel Fixed Carrier Membrane for CO ₂ Separation. 2002 , 31, 430-431	22
2124	Novel Pyrolytic Carbon Membranes Containing Silica: Preparation and Characterization. 2002 , 14, 3034-3046	56

2123	Gas Separation Properties of Polymers Containing Fluorene Moieties. 2002 , 14, 3271-3276		45
2122	Ultraparpermeable, reverse-selective nanocomposite membranes. 2002 , 296, 519-22		920
2121	The Effects of Crosslinking Chemistry on CO ₂ Plasticization of Polyimide Gas Separation Membranes. 2002 , 41, 6139-6148		227
2120	Polyimide Membranes Derived from Poly(amic acid) Salt Precursor Polymers. 1. Synthesis and Characterization. 2002 , 35, 905-911		60
2119	Rapid transport of gases in carbon nanotubes. 2002 , 89, 185901		568
2118	Selective Matrimid Membranes Containing Mesoporous Molecular Sieves. 2002 , 752, 1		3
2117	Challenges in forming successful mixed matrix membranes with rigid polymeric materials. 2002 , 86, 881-890	283	
2116	Gas-transport properties through cation-exchanged sulfonated polysulfone membranes. 2002 , 86, 2611-2617	26	
2115	Novel fixed-carrier membranes for CO ₂ separation. 2002 , 86, 2222-2226		29
2114	Enhanced gas selectivity in thin film composite membranes of poly(3-(2-acetoxyethyl)thiophene). <i>Journal of Membrane Science</i> , 2002 , 195, 181-192	9.6	19
2113	Hybrid silica-polyimide composite membranes: gas transport properties. <i>Journal of Membrane Science</i> , 2002 , 202, 97-118	9.6	163
2112	Morphology and gas permeability in copolyimides containing polydimethylsiloxane block. <i>Journal of Membrane Science</i> , 2002 , 206, 149-163	9.6	45
2111	High flux polyethersulfone/polyimide blend hollow fiber membranes for gas separation. <i>Journal of Membrane Science</i> , 2002 , 204, 153-171	9.6	110
2110	Gas separation properties of polysiloxane/polyether mixed soft segment urethane urea membranes. <i>Journal of Membrane Science</i> , 2002 , 204, 257-269	9.6	108
2109	Gas transport characteristics of plasma treated poly(dimethylsiloxane) and polyphosphazene membrane materials. <i>Journal of Membrane Science</i> , 2002 , 205, 103-112	9.6	55
2108	Carbon dioxide and nitrogen transport properties of bis(phenyl)fluorene-based cardo polymer membranes. <i>Journal of Membrane Science</i> , 2002 , 207, 91-104	9.6	97
2107	Facilitated transport of molecular oxygen in cobalt-chelated copolymer membranes prepared by soap-free emulsion polymerization. <i>Journal of Membrane Science</i> , 2002 , 208, 133-145	9.6	20
2106	Development of asymmetric 6FDA-2,6 DAT hollow fiber membranes for CO ₂ /CH ₄ separation: 1. The influence of dope composition and rheology on membrane morphology and separation performance. <i>Journal of Membrane Science</i> , 2002 , 207, 227-240	9.6	64

2105	A targeting approach to the synthesis of membrane networks for gas separations. <i>Journal of Membrane Science</i> , 2002 , 208, 193-202	9.6	25
2104	Gas transport mechanism in sulfonated polyimides. <i>Journal of Membrane Science</i> , 2002 , 209, 241-253	9.6	38
2103	Structural characterization and gas-transport properties of brominated matrimid polyimide. 2002 , 40, 4193-4204		109
2102	Gas transport properties in chlorosulfonated polyethylene-acrylate based adhesives. 2002 , 42, 1131-1140		3
2101	Mixed matrix membrane materials with glassy polymers. Part 2. 2002 , 42, 1432-1441		177
2100	Modified polysulfones 5: synthesis and characterization of tetramethyl polysulfones containing trimethylsilyl groups and their gas transport properties. 2002 , 43, 5369-5378		20
2099	Soluble aromatic polyamides containing the phenylindane group and their gas transport characteristics. 2002 , 43, 4709-4714		29
2098	Sulfonated copolyimides: influence of structural parameters on gas separation properties. 2002 , 145, 371-374		11
2097	Preparation and characterization of a glassy fluorinated polyimide zeolite-mixed matrix membrane. 2002 , 146, 3-9		97
2096	Study on polyimide/TiO ₂ nanocomposite membranes for gas separation. 2002 , 146, 49-55		109
2095	Future Directions of Membrane Gas Separation Technology. 2002 , 41, 1393-1411		1449
2094	CO ₂ Plasticization of polyethersulfone/polyimide gas-separation membranes. 2003 , 49, 1702-1711		61
2093	Overcoming the Upper Bound in Polymeric Gas-Separation Membranes. 2003 , 115, 1177-1181		2
2092	Overcoming the "upper bound" in polymeric gas-separation membranes. 2003 , 42, 1145-9		8
2091	Photoresponse gas permeability of azobenzene-functionalized glassy polymer films. 2003 , 88, 2068-2072		20
2090	Effect of solvent on properties of solution-cast dense SPPO films. 2003 , 88, 1100-1110		9
2089	Structure and gas separation properties of composite films based on polyaniline. 2003 , 89, 1379-1384		23
2088	Effect of preparation parameters on performance of dense homogeneous polycarbonate gas separation membranes. 2003 , 90, 776-785		34

2087	Impact of H ⁺ ion irradiation on Matrimid® . I. Evolution in chemical structure. 2003 , 90, 2010-2019		3
2086	Effect of humidified feeds on oxygen permeability of mixed matrix membranes. 2003 , 90, 1574-1580		31
2085	Investigation of porosity of carbon materials and related effects on gas separation properties. 2003 , 41, 253-266		195
2084	Preparation of composite membranes by atom transfer radical polymerization initiated from a porous support. <i>Journal of Membrane Science</i> , 2003 , 227, 1-14	9.6	75
2083	Membrane technology applied to the n-butane oxidation in maleic anhydride production. 2003 , 42, 45-54		1
2082	The gas separation effects of annealing polyimide/organosilicate hybrid membranes. <i>Journal of Membrane Science</i> , 2003 , 211, 25-40	9.6	119
2081	Mixed matrix membranes using carbon molecular sieves. <i>Journal of Membrane Science</i> , 2003 , 211, 311-334	9.6	589
2080	Defining the challenges for C ₃ H ₆ /C ₃ H ₈ separation using polymeric membranes. <i>Journal of Membrane Science</i> , 2003 , 211, 299-309	9.6	253
2079	Gas transport in modified polysulfones with trimethylsilyl groups: effect of substitution site. <i>Journal of Membrane Science</i> , 2003 , 212, 147-155	9.6	9
2078	Gas separation properties of aromatic polyimides. <i>Journal of Membrane Science</i> , 2003 , 215, 61-73	9.6	91
2077	Thermal optimization of polybenzimidazole meniscus membranes for the separation of hydrogen, methane, and carbon dioxide. <i>Journal of Membrane Science</i> , 2003 , 218, 11-18	9.6	120
2076	Functionalized Carbon Molecular Sieve membranes containing Ag-nanoclusters. <i>Journal of Membrane Science</i> , 2003 , 219, 47-57	9.6	60
2075	Gas transport and dynamic mechanical behavior in modified polysulfones with trimethylsilyl groups: effect of degree of substitution. <i>Journal of Membrane Science</i> , 2003 , 223, 1-10	9.6	18
2074	Gas sorption, permeation and separation of ABS copolymer membrane. <i>Journal of Membrane Science</i> , 2003 , 221, 185-197	9.6	32
2073	Polyurethane (PU) membrane preparation with and without hydroxypropyl- β -cyclodextrin and their pervaporation characteristics. <i>Journal of Membrane Science</i> , 2003 , 222, 203-217	9.6	87
2072	Characterization of nuclear tracks by positron annihilation and gas permeation. 2003 , 36, 57-61		8
2071	Synthesis and gas permeation properties of new ROMP polymers from silyl substituted norbornadienes and norbornenes. 2003 , 44, 2843-2851		45
2070	The molecular basis of CO ₂ interaction with polymers containing fluorinated groups: computational chemistry of model compounds and molecular simulation of poly[bis(2,2,2-trifluoroethoxy)phosphazene]. 2003 , 44, 4363-4372		72

2069	Permeability of polyimides derived from non-coplanar diamines and 4,4'-(hexafluoroisopropylidene)diphthalic anhydride. 2003 , 44, 4715-4721		46
2068	Solid-State Covalent Cross-Linking of Polyimide Membranes for Carbon Dioxide Plasticization Reduction. 2003 , 36, 1882-1888		161
2067	Membranes, Synthetic, Applications. 2003 , 279-344		3
2066	Sorption, Transport, and Structural Evidence for Enhanced Free Volume in Poly(4-methyl-2-pentyne)/Fumed Silica Nanocomposite Membranes. 2003 , 15, 109-123		319
2065	Diffusivities of Ar and Ne in Carbon Nanotubes. 2003 , 29, 677-684		138
2064	Enhancement in the Gas Permeabilities of Novel Polysulfones with Pendant 4-Trimethylsilyl-Hydroxybenzyl Substituents 2003 , 36, 6807-6816		34
2063	Structure-Property Relationships for Poly(pyrrolone-imide) Gas Separation Membranes. 2003 , 36, 2374-2381		66
2062	Optimal Design of Membrane/Distillation Column Hybrid Processes. 2003 , 42, 1731-1738		50
2061	Cross-linked Copolyimide Membranes for the Separation of Gaseous and Liquid Mixtures. 2003 , 1, 277-293		10
2060	Permselectivity of Gases of Novel Polyimide Membranes Having Bulky Side Chain. 2003 , 16, 277-278		
2059	Silver polymer electrolyte membranes for facilitated olefin transport: carrier properties, transport mechanism and separation performance. 2004 , 12, 145-155		26
2058	Syntheses and permselectivity properties of polysulfones based on bisphenol A and 1, 1 bi-2 naphthol. 2004 , 42, 226-231		5
2057	Synthesis, characterization, and permeability evaluation of hybrid organic/inorganic films. 2004 , 42, 4281-4292		39
2056	Effects of phenolic resin pyrolysis conditions on carbon membrane performance for gas separation. <i>Journal of Membrane Science</i> , 2004 , 228, 45-54	9.6	102
2055	Pyrolytic carbon membranes containing silica derived from poly(imide siloxane): the effect of siloxane chain length on gas transport behavior and a study on the separation of mixed gases. <i>Journal of Membrane Science</i> , 2004 , 235, 87-98	9.6	44
2054	Gas separations using non-hexafluorophosphate [PF6] ⁻ anion supported ionic liquid membranes. <i>Journal of Membrane Science</i> , 2004 , 238, 57-63	9.6	409
2053	Gas transport properties of 6FDA-TAPOB hyperbranched polyimide membrane. 2004 , 45, 7167-7171		76
2052	Natural gas permeation in polyimide membranes. <i>Journal of Membrane Science</i> , 2004 , 228, 227-236	9.6	291

2051	Relationship between chemical structure of aromatic polyimides and gas permeation properties of their carbon molecular sieve membranes. <i>Journal of Membrane Science</i> , 2004 , 229, 117-127	9.6	100
2050	Structure–gas separation property relationships of non-ionic and cationic amino-hydroxy functionalized poly (dimethylsiloxane) membranes. <i>Journal of Membrane Science</i> , 2004 , 232, 73-83	9.6	19
2049	Gas and Vapor Sorption and Permeation in Poly(2,2,4-trifluoro-5-trifluoromethoxy-1,3-dioxole-co-tetrafluoroethylene). 2004 , 37, 7688-7697		95
2048	Surface characterization, modification chemistry, and separation performance of polyimide and polyamidoamine dendrimer composite films. 2004 , 20, 8230-8		51
2047	PAMAM dendrimer-induced cross-linking modification of polyimide membranes. 2004 , 20, 2966-9		58
2046	Chapter 1 Overview membrane technology. 2004 , 10, 1-23		7
2045	Preparation and Characterization of Polysulfones Containing Both Hexafluoroisopropylidene and Trimethylsilyl Groups as Gas Separation Membrane Materials 2004 , 37, 1403-1410		42
2044	Influence of Side-Chain Length on the Gas Permeation Properties of Poly(2-alkylacetylenes) 2004 , 37, 2823-2828		38
2043	Advanced Fabrication of Carbon Molecular Sieve Membranes by Nonsolvent Pretreatment of Precursor Polymers. 2004 , 43, 6476-6483		94
2042	Fabrication of Polymer/Selective-Flake Nanocomposite Membranes and Their Use in Gas Separation. 2004 , 16, 3838-3845		138
2041	Gas Transport Properties of Tetramethyl Polysulfones Containing Trimethylsilyl Group Side Substituents. 2004 , 154-166		1
2040	Novel Carbon Molecular Sieve Membranes Derived from Poly(phenylene oxide) and Its Derivatives for Gas Separation. 2005 , 34, 958-959		22
2039	Ultrathin, cross-linked polyimide pervaporation membranes prepared from polyelectrolyte multilayers. <i>Journal of Membrane Science</i> , 2005 , 248, 161-170	9.6	55
2038	Permeability and selectivity analysis for ultrafiltration membranes. <i>Journal of Membrane Science</i> , 2005 , 249, 245-249	9.6	277
2037	Glass membranes for purification of aggressive gases: Part I: Permeability and stability. <i>Journal of Membrane Science</i> , 2005 , 259, 145-153	9.6	11
2036	Carbon-based molecular sieve membranes for gas separation by inductively-coupled-plasma chemical vapor deposition. 2005 , 77, 167-174		12
2035	Non-ideal effects in organic–inorganic materials for gas separation membranes. 2005 , 739, 87-98		481
2034	Gas transport properties of polybenzoxazinoneimides and their prepolymers. 2005 , 46, 3730-3736		24

2033	Synthesis and characterization of polyimides and co-polyimides having pendant benzoic acid moiety. 2005 , 46, 3669-3676		11
2032	A comparative structure-property study of methylphenylated and fluoromethylphenylated poly(aryl ethers) and their gas permeabilities and permselectivities. 2005 , 46, 11279-11287		26
2031	Rheological evaluation of the influence of polymer concentration and molar mass distribution on the formation and performance of asymmetric gas separation membranes prepared by dry phase inversion. 2005 , 46, 11366-11379		23
2030	Transport of water vapor and inert gas mixtures through highly selective and highly permeable polymer membranes. <i>Journal of Membrane Science</i> , 2005 , 251, 29-41	9.6	179
2029	Fundamental understanding of nano-sized zeolite distribution in the formation of the mixed matrix single- and dual-layer asymmetric hollow fiber membranes. <i>Journal of Membrane Science</i> , 2005 , 252, 89-100	9.6	119
2028	Analysis of dual-mode model parameters for gas sorption in glassy polymers. <i>Journal of Membrane Science</i> , 2005 , 253, 117-138	9.6	180
2027	The evolution of physicochemical and transport properties of 6FDA-durene toward carbon membranes; from polymer, intermediate to carbon. 2005 , 84, 59-68		76
2026	Tailoring nanospace. 2005 , 739, 173-178		33
2025	An investigation of the effects of pyrolysis parameters on gas separation properties of carbon materials. 2005 , 43, 1843-1856		163
2024	Carbon membranes from cellulose and metal loaded cellulose. 2005 , 43, 2600-2607		75
2023	Ag-Functionalized Carbon Molecular-Sieve Membranes Based on Polyelectrolyte/Polyimide Blend Precursors. 2005 , 15, 69-75		39
2022	Coordination Compound Molecular Sieve Membranes. 2005 , 17, 80-84		79
2021	Reversible Oxygen Binding to the Polymeric Cobalt Tetraazaporphyrin Complex and Oxygen-Facilitated Transport through Its Membrane. 2005 , 26, 467-470		24
2020	Polymers of intrinsic microporosity (PIMs): bridging the void between microporous and polymeric materials. 2005 , 11, 2610-20		411
2019	Physical and Gas Transport Properties of Novel Hyperbranched Polyimide-Silica Hybrid Membranes. 2005 , 53, 139-146		71
2018	Fabrication and characterization of BTDA-TDI/MDI (P84) co-polyimide membranes for the pervaporation dehydration of isopropanol. <i>Journal of Membrane Science</i> , 2005 , 264, 176-189	9.6	114
2017	Mixed gas water vapor/N transport in poly(ethylene oxide) poly(butylene terephthalate) block copolymers. <i>Journal of Membrane Science</i> , 2005 , 266, 51-61	9.6	66
2016	Membranes for solubility-based gas separation applications. 2005 , 112, 219-226		125

2015	Polypyrrole composite membrane with high permeability prepared by interfacial polymerization. 2005 , 22, 285-290	14
2014	Solvent-extraction and Langmuir-adsorption-based transport in chemically functionalized nanopore membranes. 2005 , 109, 20887-94	23
2013	Effects of Thermal Treatments and Dendrimers Chemical Structures on the Properties of Highly Surface Cross-Linked Polyimide Films. 2005 , 44, 3059-3067	56
2012	Effects of Brominating Matrimid Polyimide on the Physical and Gas Transport Properties of Derived Carbon Membranes. 2005 , 38, 10042-10049	70
2011	Effect of Hexafluoro-2-propanol Substituents in Polymers on Gas Permeability and Fractional Free Volume. 2005 , 38, 9670-9678	23
2010	Structure and properties relationships for aromatic polyimides and their derived carbon membranes: experimental and simulation approaches. 2005 , 109, 18741-8	61
2009	Synthesis of Poly(diphenylacetylene) Membranes by Desilylation of Various Precursor Polymers and Their Properties. 2005 , 38, 2704-2709	92
2008	Synthesis and Properties of Poly(diphenylacetylenes) Having Hydroxyl Groups. 2005 , 38, 4096-4102	58
2007	Hybrid Organic-Inorganic Membrane: Solving the Tradeoff between Permeability and Selectivity. 2005 , 17, 6790-6796	195
2006	Air separation by single wall carbon nanotubes: thermodynamics and adsorptive selectivity. 2005 , 123, 044705	38
2005	Sources of Non-ideal Flow Distribution and Their Effect on the Performance of Hollow Fiber Gas Separation Modules. 2005 , 33, 41-76	19
2004	Free volume and intrinsic microporosity in polymers. 2005 , 15, 1977	321
2003	Transport of Gases and Vapors in Glassy and Rubbery Polymers. 2006 , 1-47	91
2002	Gas Separation Performance of Polycarbonate Membranes Modified With Multifunctional Low Molecular-Weight Additives. 2006 , 41, 1813-1828	31
2001	Synthesis, Characterization, and Gas Permeation Properties of Silylated Derivatives of Ethyl Cellulose. 2006 , 39, 6025-6030	28
2000	Comparison of Hydrogen Sulfide Transport Properties in Fluorinated and Nonfluorinated Polymers. 2006 , 39, 7591-7600	47
1999	Plasticization-enhanced hydrogen purification using polymeric membranes. 2006 , 311, 639-42	546
1998	Synthesis and Permeation Properties of Substituted Polyacetylenes for Gas Separation and Pervaporation. 2006 , 231-250	11

1997	Polymers of Intrinsic Microporosity (PIMs): High Free Volume Polymers for Membrane Applications. 2006 , 245-246, 403-405	70
1996	Prediction of Gas Permeation Parameters of Polymers. 2006 , 211-229	4
1995	Zeolite Married to Carbon: A New Family of Membrane Materials with Excellent Gas Separation Performance. 2006 , 18, 6283-6288	54
1994	Adsorption and diffusion of carbon dioxide and nitrogen through single-walled carbon nanotube membranes. 2006 , 124, 054708	156
1993	Air separation by single wall carbon nanotubes: Mass transport and kinetic selectivity. 2006 , 124, 084702	35
1992	Polyaniline Membranes for Separation and Purification of Gases, Liquids, and Electrolyte Solutions. 2006 , 35, 249-283	57
1991	Molecular Simulation of Gas and Vapor Transport in Highly Permeable Polymers. 2006 , 95-136	21
1990	Polysulfone and Mesoporous Molecular Sieve MCM-48 Mixed Matrix Membranes for Gas Separation. 2006 , 18, 1149-1155	140
1989	Molecular Modeling Study of the Permeability/Selectivity Trade-off in Polymeric and Microporous Membranes. 2006 , 45, 5640-5648	13
1988	Polymers of intrinsic microporosity (PIMs): organic materials for membrane separations, heterogeneous catalysis and hydrogen storage. 2006 , 35, 675-83	1376
1987	Gas diffusion and solubility in He ⁺ -irradiated asymmetric polyimide membranes. 2006 , 47, 6585-6591	11
1986	Gas Transport Properties in a Novel Poly(trimethylsilylpropyne) Composite Membrane with Nanosized Organic Filler Trimethylsilylglucose. 2006 , 39, 4093-4100	37
1985	Synthesis and Properties of Membranes of Poly(diphenylacetylenes) Having Fluorines and Hydroxyl Groups. 2006 , 39, 569-574	36
1984	A Comparison of Poly(ether imide)s with 3-Phthalimide and 4-Phthalimide Units: Synthesis, Characterization, and Physical Properties. 2006 , 39, 7534-7548	31
1983	Addition-Type Polynorbornenes with Si(CH ₃) ₃ Side Groups: Synthesis, Gas Permeability, and Free Volume. 2006 , 39, 7022-7029	106
1982	Membranes for Hydrogen Purification: An Important Step toward a Hydrogen-Based Economy. 2006 , 31, 735-744	85
1981	Gas and Vapor Transport Properties of Perfluoropolymers. 2006 , 251-270	46
1980	Structure and Transport Properties of Polyimides as Materials for Gas and Vapor Membrane Separation. 2006 , 271-291	14

1979	Synthesis, properties, and gas permeability of novel poly(diarylacetylene) derivatives. 2006 , 44, 5028-5038	35
1978	Synthesis and properties of poly(phenylacetylenes) having two polar groups or one cyclic polar group on the phenyl ring. 2006 , 44, 5943-5953	10
1977	Syntheses and gas transport properties of polyarylates based on isophthalic and terephthalic acids and mixtures of bisphenol A and 1, 1 bi-2-naphthol. 2006 , 44, 256-263	4
1976	Characterization of 6FDA-based hyperbranched and linear polyimide-silica hybrid membranes by gas permeation and ¹²⁹ Xe NMR measurements. 2006 , 44, 291-298	48
1975	Poly(imide siloxane) and carbon nanotube mixed matrix membranes for gas separation. 2006 , 192, 330-339	269
1974	High-flux composite perfluorinated gas separation membranes of Hyflon [®] AD on a hollow fibre ultrafiltration membrane support. 2006 , 192, 207-213	26
1973	Solvent selection for manufacture of fluorinated polyimide composite membranes. 2006 , 193, 8-13	4
1972	Zeolite-filled PMMA composite membranes: influence of coupling agent addition on gas separation properties. 2006 , 193, 14-24	53
1971	Gas transport properties of carbon molecular sieve membranes derived from metal containing sulfonated poly(phenylene oxide). 2006 , 193, 66-72	28
1970	CO ₂ facilitated transport through an acrylamide and maleic anhydride copolymer membrane. 2006 , 193, 313-320	13
1969	Selective permeation of CO ₂ through a composite membrane with a separation layer of 2-N,N-dimethyl aminoethyl methacrylate and acrylic acid copolymer. 2006 , 193, 327-334	8
1968	Effects of oxidation curing on the permeation performances of polyphenylene oxide-derived carbon membranes. 2006 , 193, 51-57	16
1967	New possibilities for increasing the selectivity of polymer gas separating membranes. 2006 , 199, 121-123	13
1966	Development of zeolite filled polycarbonate mixed matrix gas separation membranes. 2006 , 200, 222-224	47
1965	Morphology and structure of ABS membranes filled with two different activated carbons. 2006 , 61, 5448-5454	33
1964	Asymmetric membranes of modified poly(ether ether ketone) with an ultra-thin skin for gas and vapour separations. <i>Journal of Membrane Science</i> , 2006 , 272, 188-197	9.6 47
1963	Gas permeability in rubbery polyphosphazene membranes. <i>Journal of Membrane Science</i> , 2006 , 280, 175-184	32
1962	Gas transport properties of new aromatic cardo poly(aryl ether ketone)s. <i>Journal of Membrane Science</i> , 2006 , 283, 393-398	9.6 41

1961	Enhancement of gas permeation properties of polybenzimidazoles by systematic structure architecture. <i>Journal of Membrane Science</i> , 2006 , 286, 161-169	9.6	146
1960	Modeling of enhanced penetrant diffusion in nanoparticle-polymer composite membranes. <i>Journal of Membrane Science</i> , 2006 , 286, 293-300	9.6	26
1959	Advanced functional polymer membranes. 2006 , 47, 2217-2262		1523
1958	Physical aging of thin 6FDA-based polyimide membranes containing carboxyl acid groups. Part I. Transport properties. 2006 , 47, 3094-3103		112
1957	Facilitated transport of carbon dioxide through poly(2-N,N-dimethyl aminoethyl methacrylate-co-acrylic acid sodium) membrane. 2006 , 51, 345-351		33
1956	Gas permeation properties of commercial polyphenylene oxide and Cardo-type polyimide hollow fiber membranes. 2006 , 51, 359-366		46
1955	Gas separation properties in cyclic olefin copolymer membrane studied by positron annihilation, sorption, and gas permeation. <i>Journal of Membrane Science</i> , 2006 , 274, 192-199	9.6	25
1954	Correlations between free volume characteristics and pervaporation permeability of novel PVA/PTMS hybrid membranes. <i>Journal of Membrane Science</i> , 2006 , 275, 97-104	9.6	58
1953	Nanocomposite membranes of chemisorbed and physisorbed molecules on porous alumina for environmentally important separations. <i>Journal of Membrane Science</i> , 2006 , 275, 255-260	9.6	23
1952	Transport and structural characteristics of crosslinked poly(ethylene oxide) rubbers. <i>Journal of Membrane Science</i> , 2006 , 276, 145-161	9.6	238
1951	Silica filled poly(1-trimethylsilyl-1-propyne) nanocomposite membranes: Relation between the transport of gases and structural characteristics. <i>Journal of Membrane Science</i> , 2006 , 278, 83-91	9.6	90
1950	Poly(N,N-dimethylaminoethyl methacrylate)/polysulfone composite membranes for gas separations. <i>Journal of Membrane Science</i> , 2006 , 279, 76-85	9.6	54
1949	CO ₂ permeability, diffusivity and solubility in polyethylene glycol-grafted polyionic membranes and their CO ₂ selectivity relative to methane and nitrogen. <i>Journal of Membrane Science</i> , 2006 , 281, 130-138	9.6	103
1948	Gas transport properties of segmented poly(ether siloxane urethane urea) membranes. <i>Journal of Membrane Science</i> , 2006 , 281, 747-753	9.6	37
1947	Nafion [®] /poly(vinyl alcohol) blends: Effect of composition and annealing temperature on transport properties. <i>Journal of Membrane Science</i> , 2006 , 282, 217-224	9.6	96
1946	Synthesis and characterization of poly(diphenylacetylenes) containing both hydroxy and halogen/alkyl groups as gas separation membranes. <i>Journal of Membrane Science</i> , 2006 , 285, 412-419	9.6	9
1945	Bulk-Fluid Solubility and Membrane Feasibility of Rmim-Based Room-Temperature Ionic Liquids. 2006 , 45, 6279-6283		203
1944	Transport properties of polyphenylquinoxalines. 2006 , 48, 596-600		3

1943	Chemical structure-transport behavior relationship for polyimides and copolyimides based on rigid and flexible dianhydrides. 2006 , 48, 1073-1079		4
1942	Selection of membrane materials for separation of H ₂ -containing mixtures: Database analysis. 2006 , 48, 1120-1127		7
1941	Highly selective polymeric membranes for gas separation. 2006 , 47, 4501-4504		14
1940	Estimating models for predicting effective permeability of mixed matrix membranes. <i>Journal of Membrane Science</i> , 2006 , 277, 46-54	9.6	106
1939	Effect of substituents on the permeation properties of polyamide membranes. <i>Journal of Membrane Science</i> , 2006 , 280, 659-665	9.6	70
1938	Synthesis and gas permeation properties of poly(diphenylacetylenes) having bulky alkyl/silyl and hydroxy groups. <i>Journal of Membrane Science</i> , 2006 , 282, 423-429	9.6	11
1937	Relation between network structure and gas transport in crosslinked poly(propylene glycol diacrylate). <i>Journal of Membrane Science</i> , 2006 , 283, 253-265	9.6	47
1936	Carbon membranes from cellulose: Synthesis, performance and regeneration. <i>Journal of Membrane Science</i> , 2006 , 284, 79-86	9.6	46
1935	Poly(dimethylsiloxane-urethane) membranes: Effect of hard segment in urethane on gas transport properties. <i>Journal of Membrane Science</i> , 2006 , 283, 357-365	9.6	43
1934	Influence of oxidation temperature on the gas permeation and separation properties in a microporous carbon membrane. 2006 , 23, 435-440		4
1933	CO ₂ -facilitated transport through poly(N-vinyl-β-sodium aminobutyrate-co-sodium acrylate)/polysulfone composite membranes. 2006 , 100, 275-282		21
1932	Synthesis and characterization of modified bismaleimide/polysulfone semi-interpenetrating polymer networks. 2006 , 102, 369-379		10
1931	Enhanced gas separation properties by using nanostructured PES-Zeolite 4A mixed matrix membranes. 2006 , 101, 3800-3805		92
1930	Synthesis and characterization of fluorine and nitrile containing polyimides. 2006 , 101, 3455-3461		5
1929	Developments in Membrane Research: from Material via Process Design to Industrial Application. 2006 , 8, 328-358		194
1928	High-Performance Polymer Membranes for Natural-Gas Sweetening. 2006 , 18, 39-44		191
1927	Improved SAPO-34 Membranes for CO ₂ /CH ₄ Separations. 2006 , 18, 2601-2603		241
1926	Molecular simulation of realistic membrane models of alkylated PEEK membranes. 2006 , 32, 145-154		27

1925	Polymer Membranes for Hydrogen Separations. 2006 , 31, 745-749	78
1924	Gas Transport Properties of ODP-A-TAPOB Hyperbranched Polyimide-Silica Hybrid Membranes. 2006 , 18, 655-664	18
1923	Synthesis and Properties of Amidoimide Dendrons and Dendronized Cellulose Derivatives. 2007 , 40, 9293-9303	16
1922	Recent achievements in facilitated transport membranes for separation processes. 2007 , 24, 101-118	34
1921	Gas Transport Properties of Poly(trimethylsilylpropyne) and Ethylcellulose Filled with Different Molecular Weight Trimethylsilylsaccharides: Impact on Fractional Free Volume and Chain Mobility. 2007 , 40, 3213-3222	23
1920	Polymers with cavities tuned for fast selective transport of small molecules and ions. 2007 , 318, 254-8	791
1919	Enhanced CO ₂ Separation Selectivity in Oligo(ethylene glycol) Functionalized Room-Temperature Ionic Liquids. 2007 , 46, 5380-5386	204
1918	Effect of Film Thickness on the Gas-Permeation Characteristics of Glassy Polymer Membranes. 2007 , 46, 2342-2347	122
1917	Separation of Carbon Dioxide from Natural Gas Mixtures through Polymeric Membranes. Review. 2007 , 36, 113-174	221
1916	Brominated Poly(2,6-diphenyl-1,4-phenylene oxide) and Its Silica Nanocomposite Membranes for Gas Separation. 2007 , 46, 2567-2575	62
1915	Nanocomposite Membranes for CO ₂ Separations: Silica/Brominated Poly(phenylene oxide). 2007 , 46, 1547-1551	43
1914	Screening Metal-Organic Framework Materials for Membrane-based Methane/Carbon Dioxide Separations. 2007 , 111, 14055-14059	173
1913	Effect of End Group Modification on Gas Transport Properties of 6FDA-TAPOB Hyperbranched Polyimide-Silica Hybrid Membranes. 2007 , 19, 553-564	17
1912	Synthesis and Characterization of Perfluorinated Carboxylate/Sulfonate Ionomer Membranes for Separation and Solid Electrolyte Applications. 2007 , 19, 4576-4584	21
1911	Synthesis and extremely high gas permeability of polyacetylenes containing polymethylated indan/tetrahydronaphthalene moieties. 2007 , 4269-70	21
1910	Removal of Water from Aqueous Nitric Acid Using Bifunctional Perfluorinated Ionomer Membranes. 2007 , 46, 6032-6040	2
1909	Synthesis and Performance of Polymerizable Room-Temperature Ionic Liquids as Gas Separation Membranes. 2007 , 46, 5397-5404	344
1908	Free volume in C ₆₀ modified PPO polymer membranes by positron annihilation lifetime spectroscopy. 2007 , 111, 13914-8	25

1907	Insight into the permeation barrier of glued Langmuir-Blodgett bilayers. 2007 , 129, 8663-7	14
1906	Preparation of Carbon Membranes Derived from Polymer Blends in the Presence of a Thermally Labile Polymer. 2007 , 42, 59-71	8
1905	Organic/Inorganic Hybrid Membranes with Simultaneously Enhanced Flux and Selectivity. 2007 , 46, 2544-2549	32
1904	Plasticization Suppression in Grafted Polyimide/Epoxy Network Membranes. 2007 , 46, 8183-8192	13
1903	Molecular sieving using single wall carbon nanotubes. 2007 , 7, 565-9	41
1902	On the Molecular Mechanism of H ₂ O Diffusion into Polyimides: A Vibrational Spectroscopy Investigation. 2007 , 40, 9614-9627	44
1901	Membranes for hydrogen separation. 2007 , 107, 4078-110	784
1900	A Novel Nano Structured Blend Membrane for Gas Separation. 2007 , 249-250, 330-335	16
1899	A General Strategy for Adhesion Enhancement in Polymeric Composites by Formation of Nanostructured Particle Surfaces. 2007 , 111, 652-657	105
1898	Impact of H ⁺ ion beam irradiation on Matrimid® . II. Evolution in gas transport properties. 2007 , 103, 1670-1680	8
1897	Synthesis and gas permeability of novel fluorinated poly(phenylene-co-naphthalimide)s. 2007 , 104, 2395-2402	5
1896	Development and characterization of homopolymers and copolymers from the family of polyphenylene oxides. 2007 , 106, 2140-2148	11
1895	Hierarchical nanomanufacturing: from shaped zeolite nanoparticles to high-performance separation membranes. 2007 , 46, 7560-73	296
1894	Hierarchische Nanofertigung: von geformten Zeolithnanopartikeln zu hochleistungsffigen Trennmembranen. 2007 , 119, 7704-7717	54
1893	Rapid Mass Transport in Mixed Matrix Nanotube/Polymer Membranes. 2007 , 19, 2672-2676	37
1892	Novel Ag ⁺ -zeolite/polymer mixed matrix membranes with a high CO ₂ /CH ₄ selectivity. 2007 , 53, 610-616	131
1891	A Novel Poly(4-methyl-2-pentyne)/TiO ₂ Hybrid Nanocomposite Membrane for Natural Gas Conditioning: Butane/Methane Separation. 2007 , 208, 2412-2418	34
1890	Dual-layer hollow carbon fiber membranes for gas separation consisting of carbon and mixed matrix layers. 2007 , 45, 166-172	68

1889	Carbon molecular sieve membranes derived from trimethylsilyl substituted poly(phenylene oxide) for gas separation. 2007 , 45, 553-560		71
1888	Hierarchical modelling of polymeric materials. 2007 , 62, 5697-5714		56
1887	Synthesis and gas transport property of polyimide from 2,2'-disubstituted biphenyltetracarboxylic dianhydrides (BPDA). 2007 , 43, 194-204		28
1886	Polysulfone and functionalized carbon nanotube mixed matrix membranes for gas separation: Theory and experiment. <i>Journal of Membrane Science</i> , 2007 , 294, 147-158	9.6	310
1885	Novel poly(vinyl alcohol)/carbon nanotube hybrid membranes for pervaporation separation of benzene/cyclohexane mixtures. <i>Journal of Membrane Science</i> , 2007 , 297, 236-242	9.6	129
1884	Experimental investigation of the permeability and selectivity of supported ionic liquid membranes for CO ₂ /He separation at temperatures up to 125°C. <i>Journal of Membrane Science</i> , 2007 , 298, 41-47	9.6	163
1883	Development of polycarbonate based zeolite 4A filled mixed matrix gas separation membranes. <i>Journal of Membrane Science</i> , 2007 , 303, 194-203	9.6	156
1882	Evaluation of cellulose-derived carbon molecular sieve membranes for hydrogen separation from light hydrocarbons. <i>Journal of Membrane Science</i> , 2007 , 306, 307-317	9.6	40
1881	Influence of nanostructure on light gas separations in cross-linked lyotropic liquid crystal membranes. <i>Journal of Membrane Science</i> , 2007 , 288, 13-19	9.6	48
1880	Gas separation of 6FDA/EPDA membranes Effect of the solvent on polymer surfaces and permselectivity. <i>Journal of Membrane Science</i> , 2007 , 293, 22-28	9.6	60
1879	Carbon nanotube composite membranes of brominated poly(2,6-diphenyl-1,4-phenylene oxide) for gas separation. <i>Journal of Membrane Science</i> , 2007 , 294, 178-185	9.6	192
1878	Removing thiophenes from n-octane using PDMS/AgY zeolite mixed matrix membranes. <i>Journal of Membrane Science</i> , 2007 , 295, 114-120	9.6	59
1877	Preparation and oxygen/nitrogen permeability of PDMS crosslinked membrane and PDMS/tetraethoxysilicone hybrid membrane. <i>Journal of Membrane Science</i> , 2007 , 303, 132-139	9.6	44
1876	Materials dependence of mixed gas plasticization behavior in asymmetric membranes. <i>Journal of Membrane Science</i> , 2007 , 306, 16-28	9.6	143
1875	Trimesoyl chloride crosslinked chitosan membranes for CO ₂ /N ₂ separation and pervaporation dehydration of isopropanol. <i>Journal of Membrane Science</i> , 2007 , 306, 36-46	9.6	58
1874	Gas transport properties of high free volume polyarylates based on isophthalic/terephthalic acid chloride mixtures. <i>Journal of Membrane Science</i> , 2007 , 305, 347-352	9.6	9
1873	Crosslinking poly(1-trimethylsilyl-1-propyne) and its effect on solvent resistance and transport properties. 2007 , 48, 6881-6892		41
1872	Mixed matrix membranes (MMMs) comprising organic polymers with dispersed inorganic fillers for gas separation. 2007 , 32, 483-507		1368

1871	Polymer/inorganic nanocomposite membranes for gas separation. 2007 , 55, 281-291		365
1870	Synthesis and properties of novel regioirregular polyimides from easily synthesized asymmetrical dichlorophthalimide monomers. 2007 , 45, 3550-3561		11
1869	Synthesis and properties of various poly(diarylacetylenes) containing siloxy and hydroxy groups. 2007 , 45, 4487-4495		3
1868	Effect of substituent polarity, bulk, and substitution site toward enhancing gas permeation in dibromohexafluorobisphenol-a based polyarylates. 2007 , 45, 3156-3168		4
1867	Unusual temperature dependence of the positron lifetime in a polymer of intrinsic microporosity. 2007 , 1, 190-192		29
1866	Transport properties of polyimides containing phenylquinoxaline moieties. 2007 , 49, 1045-1052		5
1865	Transport properties of poly(phenylquinoxalines) containing heterocyclic moieties. 2007 , 49, 247-252		1
1864	Synthesis and Properties of Substituted Polyacetylenes Having Cyclohexyl Groups. 2007 , 39, 968-974		7
1863	Effect of Fumed Silica Nanoparticles on the Gas Permeation Properties of Substituted Polyacetylene Membranes. 2007 , 58, 995-1003		16
1862	Effect of polyether diamine on gas permeation properties of organic-inorganic hybrid membranes. 2007 , 43, 35-40		13
1861	Gas Diffusion and Solubility in Poly(organophosphazenes): Results of Molecular Simulation Studies. 2007 , 16, 407-418		22
1860	Characterization of Nanocomposite Polymeric Membrane. 2007 , 13, 357-360		23
1859	Synthesis and properties of poly(diphenylacetylenes) containing siloxy and halogen/methyl groups and their desilylated membranes. 2007 , 48, 43-49		8
1858	The effects of chemical structure on gas transport properties of poly(aryl ether ketone) random copolymers. 2007 , 48, 311-317		11
1857	Pervaporative desulfurization of model gasoline with Ag ₂ O-filled PDMS membranes. 2007 , 57, 170-175		36
1856	On the unusual solvent retention and the effect on the gas transport in perfluorinated Hyflon AD [®] membranes. <i>Journal of Membrane Science</i> , 2007 , 287, 132-137	9.6	43
1855	A model for the performance of microporous mixed matrix membranes with oriented selective flakes. <i>Journal of Membrane Science</i> , 2007 , 295, 50-70	9.6	52
1854	Properties of composite membranes based on sulfonated poly(ether ether ketone)s (SPEEK)/phenoxy resin (PHR) for direct methanol fuel cells usages. <i>Journal of Membrane Science</i> , 2007 , 297, 162-173	9.6	66

1853	Effect of physical aging on the gas transport properties of poly(methyl methacrylate) membranes. <i>Journal of Membrane Science</i> , 2007 , 303, 29-36	9.6	20
1852	Gas sorption and transport in polyarylates: Effect of substituent symmetry and polarity. <i>Journal of Membrane Science</i> , 2007 , 303, 244-251	9.6	12
1851	Gas permeation characteristics of heterogeneous ODPABIS P polyimide membranes at different temperatures. <i>Journal of Membrane Science</i> , 2007 , 305, 160-168	9.6	19
1850	Synthesis and light gas separations in cross-linked gemini room temperature ionic liquid polymer membranes. <i>Journal of Membrane Science</i> , 2008 , 316, 186-191	9.6	133
1849	Zeolite-filled microporous mixed matrix (ZeoTIPS) membranes: Prediction of gas separation performance. <i>Journal of Membrane Science</i> , 2008 , 313, 224-231	9.6	55
1848	CO ₂ transfer in an aqueous potassium carbonate liquid membrane module with dense polymeric supporting layers: Influence of concentration, circulation flow rate and temperature. <i>Journal of Membrane Science</i> , 2008 , 318, 317-326	9.6	15
1847	Poly(ethylene oxide) induced cross-linking modification of Matrimid membranes for selective separation of CO ₂ . <i>Journal of Membrane Science</i> , 2008 , 320, 179-184	9.6	74
1846	The upper bound revisited. <i>Journal of Membrane Science</i> , 2008 , 320, 390-400	9.6	3747
1845	Polymer nanotechnology: Nanocomposites. 2008 , 49, 3187-3204		2576
1844	Characterization of the post-oxidized carbon membranes derived from poly(2,4-dimethyl-1,4-phenylene oxide) and their gas permeation properties. 2008 , 59, 190-196		21
1843	Synthesis and thermal behaviour of silicon containing poly(ester imide)s. 2008 , 91, 401-404		6
1842	The gas permeation properties of 6FDA-2, 4, 6-trimethyl-1, 3-phenylenediamine (TMPDA)/1, 3-phenylenediamine (mPDA) copolyimides. 2008 , 60, 137-147		18
1841	Synthesis and Gas Permeability of Novel Poly(diphenylacetylenes) Having Polyethylene Glycol Moieties. 2008 , 60, 441-448		15
1840	Novel organosoluble aromatic polyimides bearing pendant methoxy-substituted triphenylamine moieties: Synthesis, electrochromic, and gas separation properties. 2008 , 46, 7937-7949		82
1839	Thermal treatment of dense polyimide membranes. 2008 , 46, 1879-1890		43
1838	Improving CO ₂ permeability in polymerized room-temperature ionic liquid gas separation membranes through the formation of a solid composite with a room-temperature ionic liquid. 2008 , 19, 1415-1420		202
1837	Polymerized Lyotropic Liquid Crystal Assemblies for Membrane Applications. 2008 , 29, 367-389		95
1836	6FDA-TAPOB hyperbranched polyimide-silica hybrids for gas separation membranes. 2008 , 109, 813-819		27

1835	Gas permeability of fluorinated hyperbranched polyimide. 2008 , 109, 2341-2346		22
1834	Effect of addition of organic microspheres on proton conductivity property of sulfonated poly(arylene ether sulfone) membrane. 2008 , 109, 3739-3745		6
1833	Gas permeation properties of polyvinylchloride/polyethyleneglycol blend membranes. 2008 , 110, 1093-1098		41
1832	Highly chlorine-tolerant polymers for desalination. 2008 , 47, 6019-24		190
1831	SAPO-34 Seeds and Membranes Prepared Using Multiple Structure Directing Agents. 2008 , 20, 729-732		127
1830	High-performance membranes from polyimides with intrinsic microporosity. 2008 , 20, 2766-71		255
1829	Highly Chlorine-Tolerant Polymers for Desalination. 2008 , 120, 6108-6113		69
1828	Gas transport properties of MgO filled poly(1-trimethylsilyl-1-propyne) nanocomposites. 2008 , 49, 1659-1675		89
1827	PEG modified poly(amide-b-ethylene oxide) membranes for CO ₂ separation. <i>Journal of Membrane Science</i> , 2008 , 307, 88-95	9.6	364
1826	Gas transport property of polyallylamine/poly(vinyl alcohol)/polysulfone composite membranes. <i>Journal of Membrane Science</i> , 2008 , 310, 184-196	9.6	119
1825	Improving CO ₂ selectivity in polymerized room-temperature ionic liquid gas separation membranes through incorporation of polar substituents. <i>Journal of Membrane Science</i> , 2008 , 321, 3-7	9.6	210
1824	Comparison of diamino cross-linking in different polyimide solutions and membranes by precipitation observation and gas transport. <i>Journal of Membrane Science</i> , 2008 , 312, 174-185	9.6	118
1823	Polysulfone/silica nanoparticle mixed-matrix membranes for gas separation. <i>Journal of Membrane Science</i> , 2008 , 314, 123-133	9.6	474
1822	Crosslinked mixed matrix membranes for the purification of natural gas: Effects of sieve surface modification. <i>Journal of Membrane Science</i> , 2008 , 314, 193-199	9.6	174
1821	Mixed-matrix membranes composed of Matrimid [®] and mesoporous ZSM-5 nanoparticles. <i>Journal of Membrane Science</i> , 2008 , 325, 28-39	9.6	154
1820	Effects of cross-linkers with different molecular weights in cross-linked Matrimid 5218 and test temperature on gas transport properties. <i>Journal of Membrane Science</i> , 2008 , 323, 176-184	9.6	57
1819	Revisiting the experimental and theoretical upper bounds of light pure gas selectivity/permeability for polymeric membranes. <i>Journal of Membrane Science</i> , 2008 , 323, 299-308	9.6	33
1818	Synthesis and gas transport properties of new aromatic 3F polymers. <i>Journal of Membrane Science</i> , 2008 , 323, 379-385	9.6	8

1817	Poly(1-trimethylsilyl-1-propyne)/MFI composite membranes for butane separations. 2008 , 110, 330-338		24
1816	Exploratory development of dual-layer carbon/zeolite nanocomposite hollow fiber membranes with high performance for oxygen enrichment and natural gas separation. 2008 , 113, 315-324		39
1815	High permeability nano-composite membranes based on mesoporous MCM-41 nanoparticles in a polysulfone matrix. 2008 , 114, 129-136		143
1814	Preparation and gas separation properties of poly(furfuryl alcohol)-based C/CMS composite membranes. 2008 , 58, 412-418		62
1813	Preparation and gas permeation of composite carbon membranes from poly(phthalazinone ether sulfone ketone). 2008 , 60, 259-263		26
1812	Characterization of polyethersulfone/Matrimid [®] 5218 miscible blend mixed matrix membranes for O ₂ /N ₂ gas separation. 2008 , 63, 200-206		81
1811	Sorption behavior and separation performance of novel facilitated transport membranes for CO ₂ /CH ₄ mixtures. 2008 , 223, 425-437		22
1810	Permeation of CO ₂ and CH ₄ through a 2-(N,N-dimethyl amino) ethyl methacrylate and acrylonitrile copolymer membrane. 2008 , 223, 410-416		7
1809	Gas transport properties of 6FDA-TMPDA/MOCA copolyimides. 2008 , 44, 225-232		28
1808	Carbon nanotube mediated microscale membrane extraction. 2008 , 1211, 43-8		36
1807	Studies on polyethylene glycol/polyethersulfone composite membranes for FCC gasoline desulphurization by pervaporation. 2008 , 44, 3335-3343		25
1806	The recovery by carbon molecular sieve membranes of hydrogen transmitted in natural gas networks. 2008 , 33, 2379-2388		31
1805	Hydrogen purification using a SAPO-34 membrane. <i>Journal of Membrane Science</i> , 2008 , 307, 277-283	9.6	125
1804	Thermal treatment of poly(ethylene oxide)-segmented copolyimide based membranes: An effective way to improve the gas separation properties. <i>Journal of Membrane Science</i> , 2008 , 323, 53-59	9.6	47
1803	Finite element assessment of the potential of platelet-filled polymers for membrane gas separations. <i>Journal of Membrane Science</i> , 2008 , 325, 125-129	9.6	11
1802	The fabrication of hollow fiber membranes with double-layer mixed-matrix materials for gas separation. <i>Journal of Membrane Science</i> , 2008 , 325, 326-335	9.6	66
1801	A parametric study of CO ₂ /N ₂ gas separation membrane processes for post-combustion capture. <i>Journal of Membrane Science</i> , 2008 , 325, 284-294	9.6	172
1800	Development of mixed matrix membranes based on zeolite Nu-6(2) for gas separation. 2008 , 115, 85-92		65

1799	Membrane Separation Technology: Past, Present, and Future. 2008 , 281-333	
1798	Natural Gas Processing with Membranes: An Overview. 2008 , 47, 2109-2121	958
1797	Carbide-derived carbon membrane. 2008 , 112, 587-591	17
1796	Sorption in Zeolites Modified for Use in Organic-organic Hybrid Membranes. 2008 , 47, 591-598	16
1795	Gas Permeability, Solubility, and Diffusion Coefficients in 1,2-Polybutadiene Containing Magnesium Oxide. 2008 , 41, 2144-2156	49
1794	Polymers of Intrinsic Microporosity Derived from Bis(phenazyl) Monomers. 2008 , 41, 1640-1646	138
1793	Polymers of Intrinsic Microporosity Containing Trifluoromethyl and Phenylsulfone Groups as Materials for Membrane Gas Separation. 2008 , 41, 9656-9662	244
1792	Gas Separation, Free Volume Distribution, and Physical Aging of a Highly Microporous Spirobisindane Polymer. 2008 , 20, 2606-2608	179
1791	Gas Permeability Properties of Mixed-Matrix Matrimid Membranes Containing a Carbon Aerogel: A Material with Both Micropores and Mesopores. 2008 , 47, 2794-2802	49
1790	Solubility and Diffusivity of Gases in Mixed Matrix Membranes Containing Hydrophobic Fumed Silica: Correlations and Predictions Based on the NELF Model. 2008 , 47, 5214-5226	46
1789	Preparation and Characterization of Zeolite Membranes. 2008 , 13, 135-175	13
1788	Polyethyleneimine-Modified MCM-48 Membranes: Effect of Water Vapor and Feed Concentration on N ₂ /CO ₂ Selectivity. 2008 , 47, 201-208	62
1787	Defects in a polyelectrolyte multilayer: the inside story. 2008 , 130, 16510-1	26
1786	Effect of Anion on Gas Separation Performance of Polymer-Room-Temperature Ionic Liquid Composite Membranes. 2008 , 47, 9919-9924	136
1785	Molecular Mechanism of H ₂ O Diffusion into Polyimides: A Model Based on Dual Mobility with Instantaneous Local Nonlinear Equilibrium. 2008 , 41, 4850-4855	18
1784	Probing the gas permeability of an ionically cross-linked Langmuir-Blodgett bilayer with a "touch" of salt. 2008 , 24, 6279-84	12
1783	Sieving transport within wavy-rough nanoannuli. 2008 , 112, 3019-23	17
1782	Synthesis and Properties of Indan-Based Polyacetylenes That Feature the Highest Gas Permeability among All the Existing Polymers. 2008 , 41, 8525-8532	79

1781	Increased Molecular Weight of a Cross-Linkable Polyimide for Spinning Plasticization Resistant Hollow Fiber Membranes. 2008 , 41, 6367-6375	50
1780	Recent Progress in Mixed-Matrix Membranes. 787-819	6
1779	Shear Rheology of Suspensions of Porous Zeolite Particles in Concentrated Polymer Solutions. 2008 ,	
1778	Chitosan membrane in separation applications. 2008 , 24, 1076-1087	40
1777	Mixed Matrix Membranes from Nanostructured Materials for Gas Separation. 2008 , 653-656	6
1776	Effect of H+ and N+ Irradiation on Structure and Permeability of the Polyimide Matrimid [®] . 2008 , 43, 4030-4055	3
1775	Gas Separation by Carbon Membranes. 599-631	12
1774	Membranes in Gas Separation. 2008 , 65-106	2
1773	Carbon Dioxide Separation through Polymeric Membrane Systems for Flue Gas Applications. 2008 , 1, 52-66	204
1772	Polycarbonate/Polyamide 6/Nanoclay Ternary Nanocomposite Membranes: Preparation, Characterisation, and Gas Separation Properties. 2009 , 17, 181-187	4
1771	Fundamentals of Membrane Gas Separation. 63-82	9
1770	Polymers of Intrinsic Microporosity. 2009 ,	5
1769	Ceramic Membranes for the Separation of Carbon Dioxide: A Review. 2009 , 68, 115-138	12
1768	Copolymers of Intrinsic Microporosity Based on 2,2',3,3'-Tetrahydroxy-1,1'-dinaphthyl. 2009 , 30, 584-8	62
1767	Preparation and permeation characterization of zeolite-incorporated composite membranes. 2009 , 112, 9-18	28
1766	Synthesis of PEG-functionalized poly(diphenylacetylene)s and their gas permeation properties. 2009 , 113, 3504-3509	23
1765	Characterization of random and multiblock copolymers of highly sulfonated poly(arylene ether sulfone) for a proton-exchange membrane. 2009 , 114, 1793-1802	9
1764	Synthesis of membranes of poly(vinyl ether)s and their gas permeability. 2009 , 114, 2339-2343	11

1763	Synthesis and properties of soluble poly[bis(benzimidazobenzisoquinolinones)] based on novel aromatic tetraamine monomers. 2009 , 50, 810-816		10
1762	Thiol Functionalized Silica-Mixed Matrix Membranes for Silver Capture from Aqueous Solutions: Experimental Results and Modeling. <i>Journal of Membrane Science</i> , 2009 , 326, 460-471	9.6	49
1761	A semi-empirical approach for predicting the performance of mixed matrix membranes containing selective flakes. <i>Journal of Membrane Science</i> , 2009 , 326, 595-607	9.6	36
1760	Mixed-matrix membranes containing MOF-5 for gas separations. <i>Journal of Membrane Science</i> , 2009 , 328, 165-173	9.6	472
1759	Enhancement of the gas separation properties of polybenzimidazole (PBI) membrane by incorporation of silica nano particles. <i>Journal of Membrane Science</i> , 2009 , 331, 21-30	9.6	186
1758	Pure- and mixed-gas permeation properties of a microporous spirobisindane-based ladder polymer (PIM-1). <i>Journal of Membrane Science</i> , 2009 , 333, 125-131	9.6	214
1757	Determination of the upper limits, benchmarks, and critical properties for gas separations using stabilized room temperature ionic liquid membranes (SILMs) for the purpose of guiding future research. <i>Journal of Membrane Science</i> , 2009 , 343, 199-211	9.6	265
1756	Gas transport properties of fluorinated poly(ether imide) membranes containing indan moiety in the main chain. <i>Journal of Membrane Science</i> , 2009 , 345, 249-256	9.6	35
1755	Supported inorganic membranes: Promises and challenges. 2009 , 61, 61-71		18
1754	Synthesis, characterization, and gas permeation properties of 6FDA-2,6-DAT/mPDA copolyimides. 2009 , 4, 215-221		11
1753	Reverse-selective membranes formed by dendrimers on mesoporous ceramic supports. <i>Journal of Membrane Science</i> , 2009 , 334, 16-22	9.6	23
1752	Preparation and gas transport properties of dense fluoroaniline copolymer membranes. <i>Journal of Membrane Science</i> , 2009 , 339, 171-176	9.6	15
1751	Gas permeability and free volume in poly(amide-b-ethylene oxide)/polyethylene glycol blend membranes. <i>Journal of Membrane Science</i> , 2009 , 339, 177-183	9.6	115
1750	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	9.6	77
1749	A novel strategy for surface modification of polyimide membranes by vapor-phase ethylenediamine (EDA) for hydrogen purification. 2009 , 34, 8716-8722		80
1748	Long-term, continuous mixed-gas dry fed CO ₂ /CH ₄ and CO ₂ /N ₂ separation performance and selectivities for room temperature ionic liquid membranes. <i>Journal of Membrane Science</i> , 2009 , 327, 41-48	9.6	246
1747	Predicting gas diffusion regime within pores of different size, shape and composition. <i>Journal of Membrane Science</i> , 2009 , 336, 101-108	9.6	60
1746	An empirical correlation of gas permeability and permselectivity in polymers and its theoretical basis. <i>Journal of Membrane Science</i> , 2009 , 341, 178-185	9.6	155

1745	Structure-gas transport property relationships of poly(dimethylsiloxane-urethane) nanocomposite membranes. <i>Journal of Membrane Science</i> , 2009 , 342, 291-299	9.6	44
1744	Effect of introduction of heterocyclic moieties into polymer backbone on gas transport properties of fluorinated poly(ether imide) membranes. <i>Journal of Membrane Science</i> , 2009 , 343, 97-103	9.6	33
1743	PDMS-silica composite membranes with silane coupling for propylene separation. <i>Journal of Membrane Science</i> , 2009 , 344, 211-218	9.6	73
1742	Synthesis, characterization, and high gas permeability of poly(diarylacetylene)s having fluorenyl groups. 2009 , 50, 4159-4165		20
1741	Physical aging of ultrathin glassy polymer films tracked by gas permeability. 2009 , 50, 5565-5575		197
1740	Utilization of nanoplatelets in organic-inorganic hybrid separation materials: Separation advantages and formation challenges. 2009 , 40, 268-275		28
1739	Synthesis and characterization of crosslinked polyvinylalcohol/polyethyleneglycol blend membranes for CO ₂ /CH ₄ separation. 2009 , 40, 654-662		62
1738	The strategies of molecular architecture and modification of polyimide-based membranes for CO ₂ removal from natural gas—A review. 2009 , 34, 561-580		439
1737	Membrane separation of chlorine gas. 2009 , 48, 1-16		11
1736	Integrated design of a gas separation system for the upgrade of crude SNG with membranes. 2009 , 48, 1391-1404		34
1735	Relation between structure and gas transport properties of polyethylene oxide networks based on crosslinked bisphenol A ethoxylate diacrylate. 2009 , 64, 4707-4718		26
1734	Application of membrane separation processes in petrochemical industry: a review. 2009 , 235, 199-244		456
1733	Preparation and characterization of carbon molecular sieve membranes for gas separation—the effect of incorporated multi-wall carbon nanotubes. 2009 , 240, 40-45		49
1732	Concepts and investment cost analyses of multi-stage membrane systems used in post-combustion processes. 2009 , 1, 269-278		45
1731	State-of-the-art Adsorption and Membrane Separation Processes for Carbon Dioxide Production from Carbon Dioxide Emitting Industries. 2009 , 44, 1273-1421		231
1730	Efficient methods for screening of metal organic framework membranes for gas separations using atomically detailed models. 2009 , 25, 11786-95		149
1729	Gas-separating properties of membranes based on star-shaped fullerene (C ₆₀)-containing polystyrenes. 2009 , 51, 209-215		14
1728	Transport properties of polyimides derived from benzophenonetetracarboxylic dianhydride and other diamines. 2009 , 51, 1068-1074		7

1727	Effect of Free-Cation Substituent on Gas Separation Performance of Polymer-Room-Temperature Ionic Liquid Composite Membranes. 2009 , 48, 4607-4610	113
1726	New Carbon Dioxide-Selective Membranes Based on Sulfonated Polybenzimidazole (SPBI) Copolymer Matrix for Fuel Cell Applications. 2009 , 48, 2344-2354	46
1725	Preparation and Characterization of Carbon Membranes Derived from Poly(phthalazinone ether sulfone) for Gas Separation. 2009 , 48, 2886-2890	22
1724	High-Performance Carboxylated Polymers of Intrinsic Microporosity (PIMs) with Tunable Gas Transport Properties. 2009 , 42, 6038-6043	209
1723	Fabrication and characterization of carbon nanotubes immobilized in porous polymeric membranes. 2009 , 19, 3713	19
1722	Membrane Gas Separation: A Review/State of the Art. 2009 , 48, 4638-4663	1516
1721	Role of Lewis basicity and van der Waals forces in adhesion of silica MFI zeolites (010) with polyimides. 2009 , 25, 9101-7	18
1720	Enhancement of Gas Selectivities of Hexafluoroisopropylidene-Based Polyimides with Poly(Methylmethacrylate) Blending. 2009 , 48, 8663-8669	10
1719	Assessment of a Metal-Organic Framework Membrane for Gas Separations Using Atomically Detailed Calculations: CO ₂ , CH ₄ , N ₂ , H ₂ Mixtures in MOF-5. 2009 , 48, 914-922	129
1718	Polymers of Intrinsic Microporosity Derived from Novel Disulfone-Based Monomers. 2009 , 42, 6023-6030	127
1717	Synthesis, Characterization, and Gas Permeation Properties of a Novel Group of Polymers with Intrinsic Microporosity: PIM-Polyimides. 2009 , 42, 7881-7888	224
1716	Computational identification of a metal organic framework for high selectivity membrane-based CO ₂ /CH ₄ separations: Cu(hfipbb)(H ₂ hfipbb) _{0.5} . 2009 , 11, 11389-94	77
1715	Polymer-ionic liquid gels for enhanced gas transport. 2009 , 7227-9	71
1714	Guide to CO ₂ Separations in Imidazolium-Based Room-Temperature Ionic Liquids. 2009 , 48, 2739-2751	618
1713	Microporous organic polymers: design, synthesis, and function. 2010 , 293, 1-33	96
1712	Investigations of rubbery copolyimides for the preparation of asymmetric pervaporation membranes. 2010 , 14, 67-77	5
1711	Gas permeation properties of 6FDA-2,4-DAT/mPDA copolyimides. 2010 , 2, 57	2
1710	Physical and Gas Transport Properties of Hyperbranched Polyimide-Silica Hybrid Membranes. 2010 , 143-158	3

1709	Norbornene Polymers as Materials for Membrane Gas Separation. 2010 , 131-146		6
1708	Functionalized copolyimide membranes for the separation of gaseous and liquid mixtures. 2010 , 6, 789-800		26
1707	Gas Permeation Parameters and Other Physicochemical Properties of a Polymer of Intrinsic Microporosity (PIM-1). 2010 , 29-42		9
1706	Glassy Perfluoropolymer-Zeolite Hybrid Membranes for Gas Separations. 2010 , 111-124		1
1705	Membrane gas separation progresses for process intensification strategy in the petrochemical industry. 2010 , 50, 271-282		91
1704	Pre-seeding-Assisted synthesis of a high performance polyamide-zeolite nanocomposite membrane for water purification. 2010 , 34, 2101		47
1703	Thermal stability of 6FDA-(co-)polyimides containing carboxylic acid groups. 2010 , 95, 684-693		29
1702	Performance studies of mixed matrix membranes for gas separation: A review. 2010 , 75, 229-242		622
1701	Tuning of mass transport properties of multi-block copolymers for CO ₂ capture applications. <i>Journal of Membrane Science</i> , 2010 , 359, 54-63	9.6	55
1700	Carbon molecular sieve membranes from cellophane paper. <i>Journal of Membrane Science</i> , 2010 , 350, 180-188	9.6	45
1699	Highly gas permeable and microporous polybenzimidazole membrane by thermal rearrangement. <i>Journal of Membrane Science</i> , 2010 , 357, 143-151	9.6	117
1698	Preparation and performance assessment of binary and ternary PES-SAPO 34-HMA based gas separation membranes. <i>Journal of Membrane Science</i> , 2010 , 364, 75-81	9.6	67
1697	Aminoethylaminopropylisobutyl POSS-Polyimide nanocomposite membranes and their gas transport properties. 2010 , 168, 30-35		38
1696	Can metal-organic framework materials play a useful role in large-scale carbon dioxide separations?. 2010 , 3, 879-91		518
1695	Equations of State and Free-Volume Content. 2010 , 225-281		
1694	Molecular Sieve Membrane: Supported Metal-Organic Framework with High Hydrogen Selectivity. 2010 , 122, 558-561		153
1693	Abscheidung von Kohlendioxid: Perspektiven für neue Materialien. 2010 , 122, 6194-6219		275
1692	Molecular sieve membrane: supported metal-organic framework with high hydrogen selectivity. 2010 , 49, 548-51		497

1691	Carbon dioxide capture: prospects for new materials. 2010 , 49, 6058-82		3035
1690	Gas permeation properties of Seragel membrane. 2010 , 5, 324-329		3
1689	The art of surface modification of synthetic polymeric membranes. 2010 , 115, 855-895		204
1688	Effect of the particle size and particle agglomeration on composite membrane performance. 2010 , 118, n/a-n/a		11
1687	Flexible carbon hollow fiber membranes derived from sulfonated poly(phenylene oxide). 2010 , 75, 193-197		33
1686	Thermally rearranged (TR) polymer membranes for CO ₂ separation. <i>Journal of Membrane Science</i> , 2010 , 359, 11-24	9.6	298
1685	Preparation of new semifluorinated aromatic poly(ether amide)s and evaluation of pervaporation performance for benzene/cyclohexane 50/50 mixture. <i>Journal of Membrane Science</i> , 2010 , 349, 145-155	9.6	20
1684	Thermally rearranged (TR) poly(benzoxazole-co-pyrrolone) membranes tuned for high gas permeability and selectivity. <i>Journal of Membrane Science</i> , 2010 , 349, 358-368	9.6	132
1683	Hydrogen separation and purification using polysulfone acrylate/zeolite mixed matrix membranes. <i>Journal of Membrane Science</i> , 2010 , 350, 340-346	9.6	94
1682	Factors affect defect-free Matrimid® hollow fiber gas separation performance in natural gas purification. <i>Journal of Membrane Science</i> , 2010 , 353, 17-27	9.6	66
1681	Synthesis and characterization of new meta connecting semifluorinated poly(ether amide)s and their pervaporation properties for benzene/cyclohexane mixtures. <i>Journal of Membrane Science</i> , 2010 , 360, 380-388	9.6	13
1680	Dramatic Improvement in properties of magnetically aligned CNT/polymer nanocomposites. <i>Journal of Membrane Science</i> , 2010 , 361, 89-95	9.6	90
1679	A study of gas transport properties of semifluorinated poly (ether imide) membranes containing cardo diphenylfluorene moieties. <i>Journal of Membrane Science</i> , 2010 , 362, 58-67	9.6	27
1678	Gas transport in fluorothiophenyl modified PVC membranes. <i>Journal of Membrane Science</i> , 2010 , 362, 164-171	9.6	27
1677	Asymmetric Matrimid®/[Cu ₃ (BTC) ₂] mixed-matrix membranes for gas separations. <i>Journal of Membrane Science</i> , 2010 , 362, 478-487	9.6	238
1676	Effect of chitosan as a functionalization agent on the performance and separation properties of polyimide/multi-walled carbon nanotubes mixed matrix flat sheet membranes. <i>Journal of Membrane Science</i> , 2010 , 364, 309-317	9.6	106
1675	Performance of 6FDA/6FpDA polyimide for propylene/propane separations. <i>Journal of Membrane Science</i> , 2010 , 365, 399-408	9.6	80
1674	Synthesis and gas permeation properties of various Si-containing poly(diarylacetylene)s and their desilylated membranes. 2010 , 51, 1548-1554		11

1673	Effect of nanowhisker-modified zeolites on mechanical and thermal properties of poly(vinyl acetate) composites with pure-silica MFI. 2010 , 51, 5744-5755		14
1672	Techno-economic evaluation of biogas upgrading process using CO ₂ facilitated transport membrane. 2010 , 4, 638-646		181
1671	Partially pyrolyzed membranes (PPMs) derived from copolyimides having carboxylic acid groups. Preparation and gas transport properties. <i>Journal of Membrane Science</i> , 2010 , 349, 385-392	9.6	30
1670	Highly permeable and selective poly(benzoxazole-co-imide) membranes for gas separation. <i>Journal of Membrane Science</i> , 2010 , 350, 301-309	9.6	112
1669	Influence of TRIS-based co-monomer on structure and gas transport properties of cross-linked poly(ethylene oxide). <i>Journal of Membrane Science</i> , 2010 , 359, 25-36	9.6	29
1668	Multi-stage gas separation membrane processes used in post-combustion capture: Energetic and economic analyses. <i>Journal of Membrane Science</i> , 2010 , 359, 160-172	9.6	137
1667	Influence of temperature on the upper bound: Theoretical considerations and comparison with experimental results. <i>Journal of Membrane Science</i> , 2010 , 360, 58-69	9.6	147
1666	Preparation and dehumidification performance of composite membrane with PVA/gelatin/silica hybrid skin layer. <i>Journal of Membrane Science</i> , 2010 , 363, 316-325	9.6	34
1665	Physical properties of films made of copoly(ether-imide)s with long poly(ethylene oxide) segments. 2010 , 46, 2352-2364		22
1664	Mixed matrix membranes of 6FDA-6FpDA with surface functionalized γ -alumina particles. An analysis of the improvement of permselectivity for several gas pairs. 2010 , 65, 2227-2235		42
1663	Effect of processing on carbon molecular sieve structure and performance. 2010 , 48, 3737-3749		14
1662	Effect of polymer precursors on carbon molecular sieve structure and separation performance properties. 2010 , 48, 4432-4441		87
1661	CO ₂ capture and separation technologies for end-of-pipe applications [A review]. 2010 , 35, 2610-2628		788
1660	Synthesis and gas permeation properties of poly(diarylacetylene)s having substituted and twisted biphenyl moieties. 2010 , 48, 861-868		12
1659	Amino acid-functionalized ethyl cellulose: Synthesis, characterization, and gas permeation properties. 2010 , 48, 3986-3993		8
1658	Pervaporation performance of novel chitosan-POSS hybrid membranes: Effects of POSS and operating conditions. 2010 , 48, 2185-2192		31
1657	. 2010 ,		61
1656	Effect of Raw Multi-Wall Carbon Nanotubes on Morphology and Separation Properties of Polyimide Membranes. 2010 , 45, 2287-2297		31

1655	Membrane Engineering: Progress and Potentialities in Gas Separations. 2010 , 279-312	7
1654	Special Applications of Zeolites. 2010 , 389-410	10
1653	Advanced carbon dioxide (CO ₂) gas separation membrane development for power plants. 2010 , 143-186	1
1652	Enhanced O ₂ /N ₂ separation performance of poly(phenylene oxide)/SBA-15/carbon molecule sieve multilayer mixed matrix membrane using SBA-15 zeolite particles. 2010 ,	2
1651	Synthesis and Gas Permeability of Hyperbranched and Cross-Linked Polyimide Membranes. 2010 , 1-27	2
1650	Pore Modification in Porous Ceramic Membranes With Sol-Gel Process and Determination of Gas Permeability and Selectivity. 2010 , 287, 135-142	3
1649	Ceramic Membranes in Carbon Dioxide Capture: Applications and Potentialities. 2010 , 72, 105-118	4
1648	Polymeric Membranes for Energy Applications. 2010 ,	1
1647	Molecular dynamics simulations of adsorption and diffusion of gases in silicon-carbide nanotubes. 2010 , 132, 014310	74
1646	Carbon Nanotube Membranes: A New Frontier in Membrane Science. 2010 , 291-310	16
1645	Polymeric Membranes for Gas Separation. 2010 , 155-212	14
1644	Thermally Rearranged (TR) Polybenzoxazole: Effects of Diverse Imidization Routes on Physical Properties and Gas Transport Behaviors. 2010 , 43, 7657-7667	199
1643	Gas-Transport-Property Performance of Hybrid Carbon Molecular Sieve Polymer Materials. 2010 , 49, 9310-9321	41
1642	Intermolecular Interactions: New Way to Govern Transport Properties of Membrane Materials. 2010 , 49, 12031-12037	43
1641	Polymers of Intrinsic Microporosity with Dinaphthyl and Thianthrene Segments 2010 , 43, 8580-8587	110
1640	Mixed-Matrix Membrane Hollow Fibers of Cu ₃ (BTC) ₂ MOF and Polyimide for Gas Separation and Adsorption. 2010 , 49, 12605-12612	184
1639	CO ₂ Transport in Polysulfone Membranes Containing Zeolitic Imidazolate Frameworks As Determined by Permeation and PFG NMR Techniques. 2010 , 43, 316-325	84
1638	Highly permeable polymers for gas separation membranes. 2010 , 1, 63	279

1637	Membrane Technology: Latest Applications in the Refinery and Petrochemical Field. 2010 , 211-239	10
1636	Gas Permeation Behavior of Pebax-1657 Nanocomposite Membrane Incorporated with Multiwalled Carbon Nanotubes. 2010 , 49, 6530-6538	209
1635	Novel Aromatic Polyimides Derived from 5?-t-Butyl-2?-pivaloylimino-3,4,3??,4??-m-terphenyltetracarboxylic Dianhydride with Potential Application on Gas Separation Processes. 2010 , 43, 2268-2275	50
1634	Effect of UV-ozone treatment on poly(dimethylsiloxane) membranes: surface characterization and gas separation performance. 2010 , 26, 4392-9	71
1633	Effect of Fiber Property Variation on Hollow Fiber Membrane Module Performance in the Production of a Permeate Product. 2010 , 49, 12074-12083	7
1632	Exploitation of Intrinsic Microporosity in Polymer-Based Materials. 2010 , 43, 5163-5176	669
1631	Efficient calculation of diffusion limitations in metal organic framework materials: a tool for identifying materials for kinetic separations. 2010 , 132, 7528-39	239
1630	Membrane-based technologies for biogas separations. 2010 , 39, 750-68	395
1629	Effects of CO2 on a High Performance Hollow-Fiber Membrane for Natural Gas Purification. 2010 , 49, 4887-4896	59
1628	Polymers of intrinsic microporosity for gas permeation: a molecular simulation study. 2010 , 36, 992-1003	40
1627	Glued Langmuir-Blodgett bilayers from calix[n]arenes: influence of calix[n]arene size on ionic cross-linking, film thickness, and permeation selectivity. 2010 , 26, 12988-93	16
1626	Room-temperature ionic liquids and composite materials: platform technologies for CO(2) capture. 2010 , 43, 152-9	519
1625	Polymer Blends in Membrane Transport Processes. 2010 , 49, 11859-11865	91
1624	Liquid Membrane in Gas Separations. 2010 , 327-356	1
1623	Selecting metal organic frameworks as enabling materials in mixed matrix membranes for high efficiency natural gas purification. 2010 , 3, 343	159
1622	Hollow filler based mixed matrix membranes. 2010 , 46, 2492-4	68
1621	Molecular Simulation Study of CH4/H2 Mixture Separations Using Metal Organic Framework Membranes and Composites. 2010 , 114, 13047-13054	32
1620	Aminosilane Cross-linked PEG/PEPEG/PPEPG Membranes for CO2/N2and CO2/H2Separation. 2010 , 49, 9363-9369	30

1619	Subambient temperature CO ₂ and light gas permeation through segmented block copolymers with tailored soft phase. 2010 , 2, 551-60	38
1618	Modelling Gas Separation in Porous Membranes. 2010 , 85-109	7
1617	Advanced membrane separation processes and technology for carbon dioxide (CO ₂) capture in power plants. 2010 , 203-242	3
1616	Preparation and Characterization of Hollow Fiber Carbon Membranes from Cellulose Acetate Precursors. 2011 , 50, 2080-2087	62
1615	Using the photothermal effect to improve membrane separations via localized heating. 2011 , 21, 6079	55
1614	Grafting thermally labile molecules on cross-linkable polyimide to design membrane materials for natural gas purification and CO ₂ capture. 2011 , 4, 201-208	114
1613	2-step plasma-enhanced CVD for low-temperature fabrication of silica membranes with high gas-separation performance. 2011 , 47, 8070-2	24
1612	Separation of Hydrogen Using a Size-Changeable Nanochannel. 2011 , 115, 4721-4725	4
1611	Thermally Rearranged (TR) Poly(etherBenzoxazole) Membranes for Gas Separation. 2011 , 44, 1156-1165	132
1610	Molecule and electron transfer through coordination-based molecular assemblies. 2011 , 133, 14264-6	19
1609	Coarse-Grained Simulations of Penetrant Transport in Polymer Nanocomposites. 2011 , 44, 9839-9851	19
1608	Synthesis and Characterization of Polyimide Mixed Matrix Membranes. 2011 , 46, 2138-2147	21
1607	Correlation between free-volume properties and pervaporative flux of polyurethane-zeolite composites on organic solvent mixtures. 2011 , 115, 2947-58	18
1606	Synthesis and Gas Separation Performance of Triblock Copolymer Ion Gels with a Polymerized Ionic Liquid Mid-Block. 2011 , 44, 1732-1736	193
1605	CO ₂ Separation from Flue Gas Using Polyvinyl-(Room Temperature Ionic Liquid)Room Temperature Ionic Liquid Composite Membranes. 2011 , 50, 9344-9353	106
1604	Review of CO ₂ /CH ₄ Separation Membranes. 2011 , 14, 91-115	40
1603	Screening MetalOrganic Framework-Based Mixed-Matrix Membranes for CO ₂ /CH ₄ Separations. 2011 , 50, 12606-12616	59
1602	Modified Mesoporous Silica Gas Separation Membranes on Polymeric Hollow Fibers. 2011 , 23, 3025-3028	75

1601	Gas Permeation and Separation in Functionalized Polymers of Intrinsic Microporosity: A Combination of Molecular Simulations and Ab Initio Calculations. 2011 , 115, 14123-14130		51
1600	Thin-film composite pressure retarded osmosis membranes for sustainable power generation from salinity gradients. 2011 , 45, 4360-9		430
1599	Analysis of Membrane and Adsorbent Processes for Warm Syngas Cleanup in Integrated Gasification Combined-Cycle Power with CO ₂ Capture and Sequestration. 2011 , 50, 11313-11336		22
1598	Carbon Dioxide-Selective Facilitated Transport Membranes for Hydrogen Purification. 2011 , 115-141		2
1597	Investigation of Gas Permeability in Carbon Nanotube (CNT) Polymer Matrix Membranes via Modifying CNTs with Functional Groups/Metals and Controlling Modification Location. 2011 , 115, 6661-6670		72
1596	Synthesis and Characterization of Novel Modified SBA-15/PSF Nanocomposite Membrane Coated by PDMS for Gas Separation. 2011 , 2,		3
1595	Performance limiting effects in power generation from salinity gradients by pressure retarded osmosis. 2011 , 45, 10273-82		245
1594	Polymer of Intrinsic Microporosity Incorporating Thioamide Functionality: Preparation and Gas Transport Properties. 2011 , 44, 6471-6479		189
1593	Carbon-based Membranes for Separation Processes. 2011 ,		25
1592	Selective gas sorption in a [2+3] 'propeller' cage crystal. 2011 , 47, 8919-21		56
1591	Precursor Selection and Process Conditions in the Preparation of Carbon Membrane for Gas Separation: A Review. 2011 , 40, 261-311		123
1590	Correlations. 2011 , 14, 1-24		2
1589	New Materials, New Devices, New Solutions. 2011 , 1-15		
1588	Gas Diffusion in Multiphase Polymer Systems. 2011 , 749-775		1
1587	Semifluorinated, organo-soluble new aromatic poly(ether amide)s: Synthesis, characterization and gas transport properties. <i>Journal of Membrane Science</i> , 2011 , 382, 20-29	9.6	17
1586	Enhanced performance in pervaporation of supercritical carbon dioxide treated poly[1-(trimethylsilyl)-1-propyne] membranes. <i>Journal of Membrane Science</i> , 2011 , 382, 177-185	9.6	2
1585	Gas transport and free volume in hexafluoropropylene polymers. <i>Journal of Membrane Science</i> , 2011 , 383, 70-77	9.6	42
1584	Effect of zeolitic imidazolate frameworks on the gas transport performance of ZIF8-poly(1,4-phenylene ether-ether-sulfone) hybrid membranes. <i>Journal of Membrane Science</i> , 2011 , 383, 206-213	9.6	101

1583	Study on the morphology and gas permeation property of polyurethane membranes. <i>Journal of Membrane Science</i> , 2011 , 385-386, 76-85	9.6	67
1582	Structure-properties relationship for the gas transport properties of new fluoro-containing aromatic polymers. <i>Journal of Membrane Science</i> , 2011 , 385-386, 277-284	9.6	15
1581	MOF-containing mixed-matrix membranes for CO ₂ /CH ₄ and CO ₂ /N ₂ binary gas mixture separations. 2011 , 81, 31-40		336
1580	Effects of alkyl substitution on the physical properties and gas transport behavior in selected poly(R-phenoxyphosphazenes). 2011 , 52, 3879-3886		6
1579	The evolution of poly(hydroxyamide amic acid) to poly(benzoxazole) via stepwise thermal cyclization: Structural changes and gas transport properties. 2011 , 52, 5127-5138		47
1578	Physical aging of layered glassy polymer films via gas permeability tracking. 2011 , 52, 6117-6125		42
1577	Analysis of the Development of Membrane Technology for Gas Separation and CO ₂ Capture. 2011 , 7-26		6
1576	Gas Separation Properties of Triptycene-Based Polyimide Membranes. 2011 , 107-128		1
1575	Increase in gas separation selectivity during physical aging of OH-containing polyimide. 2011 , 51, 514-518		3
1574	Membrane separation of gaseous C ₁ -C ₄ alkanes. 2011 , 51, 585-594		13
1573	Poly(dimethylsiloxane-urethane) membranes: effect of linear siloxane chain and caged silsesquioxane on gas transport properties. 2011 , 18, 1851-1861		18
1572	Dimethyl silane-modified silica in polydimethylsiloxane as gas permeation mixed matrix membrane. 2011 , 18, 2415-2424		23
1571	Fabrication and characterization of silica modified polyimide-zeolite mixed matrix membranes for gas separation properties. 2011 , 66, 463-478		33
1570	Multifunctional thiols as additives in UV-cured PEG-diacrylate membranes for CO ₂ separation. <i>Journal of Membrane Science</i> , 2011 , 369, 429-436	9.6	38
1569	Mixed-gas CO ₂ /CH ₄ and CO ₂ /N ₂ separation with sulfonated PEEK membranes. <i>Journal of Membrane Science</i> , 2011 , 372, 87-96	9.6	69
1568	Sodium alginate-gelatin polyelectrolyte complex membranes with both high water vapor permeance and high permselectivity. <i>Journal of Membrane Science</i> , 2011 , 375, 304-312	9.6	56
1567	Enhanced pervaporation performance of poly (dimethyl siloxane) membrane by incorporating titania microspheres with high silver ion loading. <i>Journal of Membrane Science</i> , 2011 , 378, 382-392	9.6	40
1566	Separation of dimethyl ether from syn-gas components by poly(dimethylsiloxane) and poly(4-methyl-1-pentene) membranes. 2011 , 170, 178-183		6

1565	Polymeric membrane materials: new aspects of empirical approaches to prediction of gas permeability parameters in relation to permanent gases, linear lower hydrocarbons and some toxic gases. 2011 , 164, 89-99	35
1564	Enhanced gas permeability by fabricating functionalized multi-walled carbon nanotubes and polyethersulfone nanocomposite membrane. 2011 , 78, 76-82	96
1563	Effect of PMMA-graft-silica nanoparticles on the gas permeation properties of hexafluoroisopropylidene-based polyimide membranes. 2011 , 78, 281-289	20
1562	Carbon dioxide and methane gas permeations in thermally annealed and chemically cross-linked commercial polyimide hollow fiber membrane. 2011 , 12, 572-579	4
1561	Gas transport behavior of DMDCS modified MCM-48/polysulfone mixed matrix membrane coated by PDMS. 2011 , 28, 2069-2075	21
1560	The preparation of novel silica modified polyimide membranes: synthesis, characterization, and gas separation properties. 2011 , 22, 545-553	26
1559	Triphenylamine-based polyimides with trimethyl substituents for gas separation membrane and electrochromic applications. 2011 , 49, 3637-3646	46
1558	Recent developments in fuel-processing and proton-exchange membranes for fuel cells. 2011 , 60, 26-41	24
1557	Synthesis and Gas Permeation Properties of Spirobischromane-Based Polymers of Intrinsic Microporosity. 2011 , 212, 1137-1146	95
1556	Montmorillonite-filled nanocomposites of tung oil/styrene/divinylbenzene polymers prepared by thermal polymerization. 2011 , 119, 1297-1306	3
1555	Microporous carbon membranes from sulfonated poly(phthalazinone ether sulfone ketone): Preparation, characterization, and gas permeation. 2011 , 122, 1190-1197	6
1554	Co ₃ (HCOO) ₆ microporous metal-organic framework membrane for separation of CO ₂ /CH ₄ mixtures. 2011 , 17, 12076-83	50
1553	Composite phenolic resin-based carbon molecular sieve membranes for gas separation. 2011 , 49, 4348-4358	64
1552	Ultrathin polymer membranes for high throughput CO ₂ capture. 2011 , 4, 731-736	10
1551	The effect of contaminants on the composite membranes for CO ₂ separation and challenges in up-scaling of the membranes. 2011 , 4, 737-744	21
1550	Hydrogen separation performance of CMS membranes derived from the imide-functional group of two similar types of precursors. 2011 , 36, 8645-8657	28
1549	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	187
1548	Ammonia-activated mesoporous carbon membranes for gas separations. <i>Journal of Membrane Science</i> , 2011 , 368, 41-47	9.6 56

1547	Gas permeation properties of poly(urethane-urea)s containing different polyethers. <i>Journal of Membrane Science</i> , 2011 , 369, 49-58	9.6	86
1546	Mixed matrix membranes comprising glassy polymers and dispersed mesoporous silica spheres for gas separation. <i>Journal of Membrane Science</i> , 2011 , 368, 100-109	9.6	163
1545	Water permeability and water/salt selectivity tradeoff in polymers for desalination. <i>Journal of Membrane Science</i> , 2011 , 369, 130-138	9.6	488
1544	Using co-solvents and high throughput to maximize protein resistance for poly(ethylene glycol)-grafted poly(ether sulfone) UF membranes. <i>Journal of Membrane Science</i> , 2011 , 370, 166-174	9.6	16
1543	Fabrication and characterization of PPO/PVP blend carbon molecular sieve membranes for H ₂ /N ₂ and H ₂ /CH ₄ separation. <i>Journal of Membrane Science</i> , 2011 , 372, 387-395	9.6	59
1542	Prediction of the relative permeability of gases in mixed matrix membranes. <i>Journal of Membrane Science</i> , 2011 , 373, 152-159	9.6	83
1541	Crosslinkable mixed matrix membranes with surface modified molecular sieves for natural gas purification: II. Performance characterization under contaminated feed conditions. <i>Journal of Membrane Science</i> , 2011 , 377, 82-88	9.6	18
1540	Solubility controlled permeation of hydrocarbons in novel highly permeable polymers. <i>Journal of Membrane Science</i> , 2011 , 378, 250-256	9.6	23
1539	Perspectives on mixed matrix membranes. <i>Journal of Membrane Science</i> , 2011 , 378, 393-397	9.6	175
1538	Amine-functionalized zeolite FAU/EMT-polyimide mixed matrix membranes for CO ₂ /CH ₄ separation. <i>Journal of Membrane Science</i> , 2011 , 379, 468-478	9.6	124
1537	Matrimid [®] derived carbon molecular sieve hollow fiber membranes for ethylene/ethane separation. <i>Journal of Membrane Science</i> , 2011 , 380, 138-147	9.6	122
1536	Solvothermal deposition and characterization of magnesium hydroxide nanostructures on zeolite crystals. 2011 , 139, 120-129		43
1535	Application of tailor-made membranes in a multi-stage process for the purification of sweeteners from <i>Stevia rebaudiana</i> . 2011 , 103, 285-293		39
1534	The effect of TiO ₂ nanoparticles on gas transport properties of Matrimid [®] 218-based mixed matrix membranes. 2011 , 77, 128-136		154
1533	Permeation and sorption properties of poly(ether-block-amide) membranes filled by two types of zeolites. 2011 , 80, 418-427		57
1532	Fundamental salt and water transport properties in directly copolymerized disulfonated poly(arylene ether sulfone) random copolymers. 2011 , 52, 2032-2043		86
1531	Physical aging of 6FDA-based polyimide membranes monitored by gas permeability. 2011 , 52, 3374-3380		66
1530	High Temperature Gas Separations Using High Performance Polymers. 2011 , 14, 295-307		4

1529	Polymers with Inherent Microporosity. 2011 , 1-29	2
1528	Preparation and Characterization of PMMA-b-PDMAEMA/Polysulfone Composite Membranes by RAFT Polymerization and their Permeation Performance of Carbon Dioxide. 2011 , 284-286, 1717-1723	3
1527	Reassessing molecular sieving by kinked carbon nanotubes. 2011 , 19, 085009	6
1526	Polymeric membranes for natural gas processing. 2011 , 339-360	5
1525	Fundamental science of gas and vapour separation in polymeric membranes. 2011 , 22-55	3
1524	Comparison between Treated and Untreated Zeolite towards the Performance of Polyethersulfone Mixed Matrix Membranes (MMMs) for O ₂ /N ₂ Gas Separation. 2012 , 550-553, 728-735	4
1523	Membranes, adsorbent materials and solvent-based materials for syngas and hydrogen separation. 2012 , 179-216	5
1522	Polymers of Intrinsic Microporosity. 2012 , 2012, 1-16	135
1521	Modifications of Polymeric Membranes by Incorporating Metal/Metal Oxide Nanoparticles. 2012 , 77-118	1
1520	Alkyne Polymerization. 2012 , 875-954	9
1519	Membrane Technology. 2012 , 177-218	1
1518	Amine-Functionalized MIL-53 Metal-Organic Framework in Polyimide Mixed Matrix Membranes for CO ₂ /CH ₄ Separation. 2012 , 51, 6895-6906	164
1517	Predicting the Performance of Zeolite Imidazolate Framework/Polymer Mixed Matrix Membranes for CO ₂ , CH ₄ , and H ₂ Separations Using Molecular Simulations. 2012 , 51, 14218-14228	58
1516	Porous Carbon Nanotube Membranes for Separation of H ₂ /CH ₄ and CO ₂ /CH ₄ Mixtures. 2012 , 116, 25904-25913	13
1515	The removal of CO ₂ and N ₂ from natural gas: A review of conventional and emerging process technologies. 2012 , 94-95, 123-154	382
1514	Carbon-Al ₂ O ₃ -Ag composite molecular sieve membranes for gas separation. 2012 , 90, 2338-2345	31
1513	Evolution of polymeric hollow fibers as sustainable technologies: Past, present, and future. 2012 , 37, 1401-1424	292
1512	Preparation and Gas Separation Properties of Polyphenylsulfone(PPSF)/Polyetherimide(PEI)/Silica Nanocomposite Membranes. 2012 , 44, 772-773	

1511	Detailed Investigation on Laboratory Scale Mixed-matrix-membrane Preparation for Gas Separation. 2012 , 44, 1870-1872		1
1510	REMOVED: Effect of Zeolite Preheat Treatment and Membrane Post Heat Treatment on the Gas Separation Properties of PVAc/4A Mixed Matrix Membrane. 2012 , 44, 1655-1661		
1509	Hybrid brominated sulfonated poly(2,6-diphenyl-1,4-phenylene oxide) and SiO ₂ nanocomposite membranes for CO ₂ /N ₂ separation. 2012 , 22, 661-667		28
1508	Gas Sorption and Diffusion in Amorphous and Semicrystalline Nanoporous Poly(2,6-dimethyl-1,4-phenylene)oxide. 2012 , 45, 3604-3615		52
1507	Preparation of composite membranes with bicontinuous structure. 2012 , 28, 8197-204		2
1506	Mixed matrix membranes of aminosilanes grafted FAU/EMT zeolite and cross-linked polyimide for CO ₂ /CH ₄ separation. 2012 , 53, 3269-3280		77
1505	Progress in adsorption-based CO ₂ capture by metal-organic frameworks. 2012 , 41, 2308-22		1080
1504	Novel triphenylamine-containing ambipolar polyimides with pendant anthraquinone moiety for polymeric memory device, electrochromic and gas separation applications. 2012 , 22, 20394		55
1503	High CO ₂ solubility, permeability and selectivity in ionic liquids with the tetracyanoborate anion. 2012 , 2, 11813		96
1502	Functionalized metal organic framework-polyimide mixed matrix membranes for CO ₂ /CH ₄ separation. <i>Journal of Membrane Science</i> , 2012 , 413-414, 48-61	9.6	271
1501	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). <i>Journal of Membrane Science</i> , 2012 , 415-416, 558-567	9.6	103
1500	Gas permeability properties of decorated MCM-41/polyethylene hybrids prepared by in-situ polymerization. <i>Journal of Membrane Science</i> , 2012 , 415-416, 702-711	9.6	33
1499	Layer-by-layer assembled nanohybrid multilayer membranes for pervaporation dehydration of acetone/water mixtures. <i>Journal of Membrane Science</i> , 2012 , 415-416, 745-757	9.6	32
1498	Effect of thermal treatment on gas transport properties of hyperbranched polyimide/silica hybrid membranes. <i>Journal of Membrane Science</i> , 2012 , 417-418, 193-200	9.6	16
1497	Gas transport properties of hyperbranched polyimide/hydroxy polyimide blend membranes. 2012 , 48, 1504-1512		23
1496	A spirobifluorene-based polymer of intrinsic microporosity with improved performance for gas separation. 2012 , 24, 5930-3		249
1495	Continuous Polycrystalline Zeolitic Imidazolate Framework-90 Membranes on Polymeric Hollow Fibers. 2012 , 124, 10767-10770		28
1494	Continuous polycrystalline zeolitic imidazolate framework-90 membranes on polymeric hollow fibers. 2012 , 51, 10615-8		156

1493	Advances in high permeability polymeric membrane materials for CO ₂ separations. 2012 , 5, 7306-7322		391
1492	Investigation of cross-linked and additive containing polymer materials for membranes with improved performance in pervaporation and gas separation. 2012 , 2, 727-63		63
1491	Polymer Membranes. 2012 , 325-347		8
1490	Metal-organic frameworks in mixed-matrix membranes for gas separation. 2012 , 41, 14003-27		391
1489	Feasibility of zeolitic imidazolate framework membranes for clean energy applications. 2012 , 5, 7637		137
1488	Practical Approach to Zeolitic Membranes and Coatings: State of the Art, Opportunities, Barriers, and Future Perspectives. 2012 , 24, 2829-2844		296
1487	Gas separation characteristics of new membrane materials based on poly(ethylene glycol)-crosslinked polymers and ionic liquids. 2012 , 52, 494-498		19
1486	Hydrogen separation and purification using crosslinkable PDMS/zeolite A nanoparticles mixed matrix membranes. 2012 , 37, 14576-14589		137
1485	ABA-triblock copolymer ion gels for CO ₂ separation applications. <i>Journal of Membrane Science</i> , 2012 , 423-424, 20-26	9.6	66
1484	Olefins-selective asymmetric carbon molecular sieve hollow fiber membranes for hybrid membrane-distillation processes for olefin/paraffin separations. <i>Journal of Membrane Science</i> , 2012 , 423-424, 314-323	9.6	88
1483	Functionalized polyaniline-based composite membranes with vastly improved performance for separation of carbon dioxide from methane. <i>Journal of Membrane Science</i> , 2012 , 423-424, 514-521	9.6	44
1482	Some approaches for high performance polymer based membranes for gas separation: block copolymers, carbon molecular sieves and mixed matrix membranes. 2012 , 2, 10745		144
1481	Phase Segregation and Gas Separation Properties of Thermally Treated Copoly(ether-imide) from an Aromatic Dianhydride, an Aromatic Diamine, and Various Aliphatic Diamines. 2012 , 51, 3766-3775		14
1480	Gas Separation. 2012 , 325-378		8
1479	Carrier Facilitated Transport. 2012 , 453-491		
1478	Affinity between Metal-Organic Frameworks and Polyimides in Asymmetric Mixed Matrix Membranes for Gas Separations. 2012 , 51, 10156-10164		74
1477	Gas sorption and permeation in mixed matrix membranes based on glassy polymers and silica nanoparticles. 2012 , 1, 148-155		21
1476	Zeolitic imidazolate framework (ZIF-8) based polymer nanocomposite membranes for gas separation. 2012 , 5, 8359		535

1475	A method for increasing permeability in O ₂ /N ₂ separation with mixed-matrix membranes made of water-stable MIL-101 and polysulfone. 2012 , 48, 2140-2	117
1474	Gas Separation Properties of Polyimide-Zeolite Mixed Matrix Membranes. 2012 , 47, 950-962	39
1473	SPEEK and functionalized mesoporous MCM-41 mixed matrix membranes for CO ₂ separations. 2012 , 22, 20057	68
1472	A high CO ₂ permselective mesoporous silica/carbon composite membrane for CO ₂ separation. 2012 , 50, 5186-5195	49
1471	Preparation and Characterization of AgA Zeolite/Polysulfone Membranes. 2012 , 549, 401-405	
1470	A highly permeable and selective zeolitic imidazolate framework ZIF-95 membrane for H ₂ /CO ₂ separation. 2012 , 48, 10981-3	174
1469	Natural Gas Purification Technologies - Major Advances for CO ₂ Separation and Future Directions. 2012 ,	37
1468	Molecular Dynamics Investigation into the High Permeability and High Selectivity of Nano-Porous Polyimide Membranes for the Green Separation of Natural Gas. 2012 , 10, 63-68	
1467	Preparation and characterization of mixed matrix membranes based on poly(vinylidene fluoride) and zeolite 4A for gas separation. 2012 , 52, 2106-2113	20
1466	Current Status of Metal-Organic Framework Membranes for Gas Separations: Promises and Challenges. 2012 , 51, 2179-2199	405
1465	Polymeric Gas Separation Membranes. 2012 , 45, 3298-3311	537
1464	Synthesis and Gas Transport Properties of Hydroxyl-Functionalized Polyimides with Intrinsic Microporosity. 2012 , 45, 3841-3849	163
1463	Microporous copolymers for increased gas selectivity. 2012 , 3, 2034	125
1462	Water and beyond: Expanding the spectrum of large-scale energy efficient separation processes. 2012 , 58, 2624-2633	116
1461	Preparation and characterization of polyimide and polyethersulfone blend membrane for gas separation. 2012 , 7, 747-754	8
1460	Ionic liquid modified poly(2,6-dimethyl-1,4-phenylene oxide) for CO ₂ separation. 2012 , 19, 1	22
1459	Carbon molecular sieve dense film membranes derived from Matrimid for ethylene/ethane separation. 2012 , 50, 1488-1502	112
1458	Preparation and characterization of mixed matrix membranes based on PVDF and three inorganic fillers (fumed nonporous silica, zeolite 4A and mesoporous MCM-41) for gas separation. 2012 , 192, 201-210	101

1457	A review on removal of sulfur components from gasoline by pervaporation. 2012 , 90, 409-432		79
1456	New permeation models for nanocomposite polymeric membranes filled with nonporous particles. 2012 , 90, 563-575		43
1455	Membrane gas separation applications in natural gas processing. 2012 , 96, 15-28		371
1454	Effect of electric field variation in alignment of SWNT/PC nanocomposites. 2012 , 37, 3945-3948		16
1453	Minimizing specific energy consumption of oxygen enrichment in polymeric hollow fiber membrane modules. 2012 , 94, 285-294		17
1452	High throughput atmospheric pressure plasma-induced graft polymerization for identifying protein-resistant surfaces. 2012 , 33, 1261-70		51
1451	Diamino-organosilicone APTMDS: A new cross-linking agent for polyimides membranes. 2012 , 86, 221-233		40
1450	A comparison of commercial reverse osmosis membrane characteristics and performance under alginate fouling conditions. 2012 , 89, 270-281		46
1449	A comparison on gas separation between PES (polyethersulfone)/MMT (Na-montmorillonite) and PES/TiO ₂ mixed matrix membranes. 2012 , 92, 57-63		94
1448	Thermally treated copoly(ether-imide)s made from bpda and alifatic plus aromatic diamines. GAS separation properties with different aromatic diamines. <i>Journal of Membrane Science</i> , 2012 , 387-388, 54-65	9.6	32
1447	Modification of carbon molecular sieve membrane structure by self-assisted deposition carbon segment for gas separation. <i>Journal of Membrane Science</i> , 2012 , 389, 223-233	9.6	45
1446	Asymmetric hollow fibre membranes based on ring-substituted polyaniline and investigation towards its gas transport properties. <i>Journal of Membrane Science</i> , 2012 , 397-398, 38-50	9.6	10
1445	Influence of support structure on the permeation behavior of polyetherimide-derived carbon molecular sieve composite membrane. <i>Journal of Membrane Science</i> , 2012 , 405-406, 250-260	9.6	34
1444	Computational screening of metal organic frameworks for mixed matrix membrane applications. <i>Journal of Membrane Science</i> , 2012 , 407-408, 221-230	9.6	40
1443	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	9.6	136
1442	Exfoliated zeolite Nu-6(2) as filler for 6FDA-based copolyimide mixed matrix membranes. <i>Journal of Membrane Science</i> , 2012 , 411-412, 146-152	9.6	20
1441	Sonication-induced Ostwald ripening of ZIF-8 nanoparticles and formation of ZIF-8/polymer composite membranes. 2012 , 158, 292-299		153
1440	Recent developments in membrane-based technologies for CO ₂ capture. 2012 , 38, 419-448		366

1439	Nanoporous organic polymer networks. 2012 , 37, 530-563		941
1438	Effects of phase inversion and composition of casting solution on morphology and gas permeance of polyethersulfone/polyimide blend membranes. 2012 , 31, 298-309		11
1437	Mixed gas and pure gas transport properties of copolyimide membranes. 2013 , 128, 380-389		31
1436	Synthesis and gas transport properties of novel hyperbranched polyimide-silica hybrid membranes. 2013 , 127, 316-322		19
1435	Synthesis of novel poly(aryl ether sulfone)s bearing bulky pendants for gas separation membranes. 2013 , 21, 608-613		7
1434	Pyrrolidinium-based polymeric ionic liquid materials: New perspectives for CO ₂ separation membranes. <i>Journal of Membrane Science</i> , 2013 , 428, 260-266	9.6	136
1433	Influence of inorganic fillers on the structural and transport properties of mixed matrix membranes. 2013 , 128, 4058-4066		17
1432	Combination of ordered mesoporous silica MCM-41 and layered titanosilicate JDF-L1 fillers for 6FDA-based copolyimide mixed matrix membranes. <i>Journal of Membrane Science</i> , 2013 , 431, 163-170	9.6	70
1431	SBA-15/CMS composite membrane for H ₂ purification and CO ₂ capture: Effect of pore size, pore volume, and loading weight on separation performance. 2013 , 180, 270-279		13
1430	CO ₂ -Selective Membranes Containing Sterically Hindered Amines for CO ₂ /H ₂ Separation. 2013 , 52, 8774-8782		88
1429	Pebax-1657 nanocomposite membranes incorporated with nanoparticles/colloids/carbon nanotubes for CO ₂ /N ₂ and CO ₂ /H ₂ separation. 2013 , 130, 2867-2876		95
1428	Mixed matrix membranes comprising of Matrimid and SO ₃ H functionalized mesoporous MCM-41 for gas separation. <i>Journal of Membrane Science</i> , 2013 , 447, 73-79	9.6	79
1427	Equilibrium and transient sorption of vapours and gases in the polymer of intrinsic microporosity PIM-1. <i>Journal of Membrane Science</i> , 2013 , 434, 148-160	9.6	65
1426	Perfluorocyclobutane and poly(vinylidene fluoride) blend membranes for fuel cells. 2013 , 110, 306-315		18
1425	Membrane Separation of CO ₂ from Natural Gas: A State-of-the-Art Review on Material Development. 2013 , 333, 135-147		6
1424	Membrane-Based Oxygen-Enriched Combustion. 2013 , 52, 10820-10834		52
1423	Theoretical and experimental studies on the gas transport properties of mixed matrix membranes based on polyvinylidene fluoride. 2013 , 59, 4715-4726		24
1422	Silane Modification of Cellulose Acetate Dense Films as Materials for Acid Gas Removal. 2013 , 46, 5584-5594		74

1421	Synthesis of room temperature ionic liquids based random copolyimides for gas separation applications. 2013 , 49, 482-491		35
1420	Effect of zeolite preheat treatment and membrane post heat treatment on the performance of polyvinyl acetate/zeolite 4A mixed matrix membrane. 2013 , 115, 163-171		12
1419	Alkyl-methylimidazolium Tricyanomethanide Ionic Liquids under Extreme Confinement onto Nanoporous Ceramic Membranes. 2013 , 117, 10114-10127		45
1418	Post-combustion Carbon Capture with a Gas Separation Membrane: Parametric Study, Capture Cost, and Exergy Analysis. 2013 , 27, 4137-4149		60
1417	Gas separation properties of mixed-matrix membranes containing porous polyimides fillers. <i>Journal of Membrane Science</i> , 2013 , 447, 403-412	9.6	24
1416	Cross-Linkable Polyimide Membranes for Improved Plasticization Resistance and Permselectivity in Sour Gas Separations. 2013 , 46, 6908-6921		60
1415	Gas Separation Membranes. 2013 , 1		1
1414	Natural Gas Purification. 2013 , 1		5
1413	Gas Separation, Applications. 2013 , 1		3
1412	Experimental investigation, modeling and scale-up of hydrophilic vapor permeation membranes: Separation of azeotropic dimethyl carbonate/methanol mixtures. 2013 , 118, 862-878		34
1411	Physical aging of polystyrene films tracked by gas permeability. 2013 , 54, 873-880		34
1410	Cross-Linked Thermally Rearranged Poly(benzoxazole-co-imide) Membranes for Gas Separation. 2013 , 46, 8179-8189		92
1409	Energy-efficient polymeric gas separation membranes for a sustainable future: A review. 2013 , 54, 4729-4761	895	
1408	Recent Applications of Polymer Blends in Gas Separation Membranes. 2013 , 36, 1838-1846		119
1407	Metallic copper incorporated ionic liquids toward maximizing CO ₂ separation properties. 2013 , 112, 49-53		20
1406	Ionic resistance and permselectivity tradeoffs in anion exchange membranes. 2013 , 5, 10294-301		172
1405	Glassy Polynorbornenes with SiDBi Containing Side Groups. Novel Materials for Hydrocarbon Membrane Separation. 2013 , 46, 8973-8979		42
1404	Novel Spirobifluorene- and Dibromospirobifluorene-Based Polyimides of Intrinsic Microporosity for Gas Separation Applications. 2013 , 46, 9618-9624		89

1403	Local chain mobility dependence on molecular structure in polyimides with bulky side groups: Correlation with gas separation properties. <i>Journal of Membrane Science</i> , 2013 , 434, 121-129	9.6	42
1402	On the influence of the proportion of PEO in thermally controlled phase segregation of copoly(ether-imide)s for gas separation. <i>Journal of Membrane Science</i> , 2013 , 434, 26-34	9.6	20
1401	Influence of the PEO length in gas separation properties of segregating aromatic ω liphatic copoly(ether-imide)s. 2013 , 104, 574-585		14
1400	Mechanically robust thermally rearranged (TR) polymer membranes with spirobisindane for gas separation. <i>Journal of Membrane Science</i> , 2013 , 434, 137-147	9.6	143
1399	Poly(amide-12-b-ethylene oxide)/polyethylene glycol blend membranes for carbon dioxide separation. 2013 , 116, 25-34		64
1398	Gas separation performance of 6FDA-based polyimides with different chemical structures. 2013 , 54, 6226-6235		110
1397	Dual layer hollow fiber sorbents: Concept, fabrication and characterization. 2013 , 104, 68-80		21
1396	Effect of composition and nanostructure on CO ₂ /N ₂ transport properties of supported alkyl-imidazolium block copolymer membranes. <i>Journal of Membrane Science</i> , 2013 , 430, 312-320	9.6	42
1395	Rigorous calculations of permeation in mixed-matrix membranes: Evaluation of interfacial equilibrium effects and permeability-based models. <i>Journal of Membrane Science</i> , 2013 , 448, 160-169	9.6	38
1394	High performance polymer membranes for CO ₂ separation. 2013 , 2, 238-244		66
1393	A Multi-Structural Model for Prediction of Effective Gas Permeability in Mixed-Matrix Membranes. 2013 , 214, 2367-2376		13
1392	The role of membranes in post-combustion CO ₂ capture. 2013 , 3, 318-337		56
1391	Thermally rearranged (TR) poly(benzoxazole-co-amide) membranes for hydrogen separation derived from 3,3'-dihydroxy-4,4'-diamino-biphenyl (HAB), 4,4'-oxydianiline (ODA) and isophthaloyl chloride (IPCL). <i>Journal of Membrane Science</i> , 2013 , 446, 294-302	9.6	55
1390	Mixed matrix membranes composed of various polymer matrices and magnetic powder for air separation. 2013 , 118, 424-431		30
1389	Comparison of theoretical and experimental mass transfer coefficients of gases in supported ionic liquid membranes. 2013 , 118, 255-263		14
1388	Review of recent advances in carbon dioxide separation and capture. 2013 , 3, 22739		521
1387	High flux CO ₂ transporting nanochannel fabricated by the self-assembly of a linear-brush block copolymer. 2013 , 1, 8097		13
1386	Optimization of continuous phase in amino-functionalized metal ω rganic framework (MIL-53) based co-polyimide mixed matrix membranes for CO ₂ /CH ₄ separation. 2013 , 3, 24266		102

1385	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. 2013 , 1, 6063		69
1384	An efficient polymer molecular sieve for membrane gas separations. 2013 , 339, 303-7		710
1383	Crosslinking polyimides for membrane applications: A review. 2013 , 38, 874-896		352
1382	The effects of substrate characteristics and pre-wetting agents on PAN/DMS composite hollow fiber membranes for CO ₂ /N ₂ and O ₂ /N ₂ separation. <i>Journal of Membrane Science</i> , 2013 , 434, 18-25	9.6	105
1381	Gas separation properties of systems with different amounts of long poly(ethylene oxide) segments for mixtures including carbon dioxide. 2013 , 12, 146-154		22
1380	Separation performance of PVAm composite membrane for CO ₂ capture at various pH levels. <i>Journal of Membrane Science</i> , 2013 , 428, 218-224	9.6	103
1379	Polymers of Intrinsic Microporosity Containing Tröger Base for CO ₂ Capture. 2013 , 52, 16939-16950		57
1378	Molecular dynamics simulations of gas selectivity in amorphous porous molecular solids. 2013 , 135, 17818-30		81
1377	Sorption and transport of small gas molecules in thermally rearranged (TR) polybenzoxazole membranes based on 2,2-bis(3-amino-4-hydroxyphenyl)-hexafluoropropane (bisAPAF) and 4,4'-hexafluoroisopropylidene diphthalic anhydride (6FDA). <i>Journal of Membrane Science</i> , 2013 , 441, 1-8	9.6	53
1376	The effect of block length upon structure, physical properties, and transport within a series of sulfonated poly(arylene ether sulfone)s. <i>Journal of Membrane Science</i> , 2013 , 430, 106-112	9.6	19
1375	A nitrogen-doped carbon nanotube enhanced polyethersulfone membrane system for water treatment. 2013 , 66, 148-156		38
1374	Effect of the acetate group content on gas permeation through membranes based on poly(ethylene-co-vinyl acetate) and its blends. <i>Journal of Membrane Science</i> , 2013 , 443, 227-236	9.6	9
1373	Dynamic relaxation characteristics of thermally rearranged aromatic polyimides. 2013 , 54, 891-900		34
1372	Mixed matrix membranes containing MOFs for ethylene/ethane separation Part A: Membrane preparation and characterization. <i>Journal of Membrane Science</i> , 2013 , 428, 445-453	9.6	73
1371	Hydrogen sorption in polymers for membrane applications. 2013 , 54, 3026-3037		40
1370	Studies of separation of vapours and gases through composite membranes with ferroferric oxide magnetic nanoparticles. 2013 , 109, 55-63		21
1369	Reverse-selective polymeric membranes for gas separations. 2013 , 38, 740-766		136
1368	Optimizing polyamide thin film composite membrane covalently bonded with modified mesoporous silica nanoparticles. <i>Journal of Membrane Science</i> , 2013 , 428, 341-348	9.6	184

1367	Synthesis of porous, nitrogen-doped adsorption/diffusion carbonaceous membranes for efficient CO ₂ separation. 2013 , 34, 452-9	41
1366	Kinetically controlled porosity in a robust organic cage material. 2013 , 52, 3746-9	122
1365	Analysis of hollow fibre membrane systems for multicomponent gas separation. 2013 , 91, 332-347	36
1364	Gas separation by polymer membranes: beyond the border. 2013 , 52, 4982-4	37
1363	Membrane-based ethylene/ethane separation: The upper bound and beyond. 2013 , 59, 3475-3489	122
1362	Current status and development of membranes for CO ₂ /CH ₄ separation: A review. 2013 , 12, 84-107	428
1361	Thermal degradation of crosslinked copolyimide membranes to obtain productive gas separation membranes. 2013 , 98, 743-750	8
1360	Combinatorial synthesis with high throughput discovery of protein-resistant membrane surfaces. 2013 , 34, 6133-8	24
1359	Post-synthetic structural processing in a metal-organic framework material as a mechanism for exceptional CO ₂ /N ₂ selectivity. 2013 , 135, 10441-8	172
1358	Challenges and opportunities for mixed-matrix membranes for gas separation. 2013 , 1, 4610	474
1357	Effect of the chemical structure of various diamines on the gas separation of thermally rearranged poly(benzoxazole-co-imide) (TR-PBO-co-I) membranes. <i>Journal of Membrane Science</i> , 2013 , 444, 365-377 ^{9.6}	50
1356	Interfacially polymerized layers for oxygen enrichment: a method to overcome Robeson's upper-bound limit. 2013 , 5, 5563-8	19
1355	Synthesis and gas permeation properties of novel spirobisindane-based polyimides of intrinsic microporosity. 2013 , 4, 3813	120
1354	Polysulfone mixed matrix gas separation hollow fibre membranes filled with polymer and carbon xerogels. 2013 , 92, 13-20	28
1353	New tricks for old molecules: development and application of porous N-doped, carbonaceous membranes for CO ₂ separation. 2013 , 25, 4152-8	58
1352	Large-scale screening of zeolite structures for CO ₂ membrane separations. 2013 , 135, 7545-52	93
1351	Photo-oxidative enhancement of polymeric molecular sieve membranes. 2013 , 4, 1918	94
1350	Comparison of biogas upgrading performances of different mixed matrix membranes. 2013 , 222, 209-217	43

1349	Structure-property relationships of hyperbranched polyimide-silica hybrid membranes with different degrees of modification. 2013 , 130, 54-62		8
1348	High toughness, high conductivity ion gels by sequential triblock copolymer self-assembly and chemical cross-linking. 2013 , 135, 9652-5		157
1347	Toward Effective CO ₂ /CH ₄ Separations by Sulfur-Containing PIMs via Predictive Molecular Simulations. 2013 , 46, 5371-5380		49
1346	Permeability and diffusivity of CO ₂ in glassy polymers with and without plasticization. <i>Journal of Membrane Science</i> , 2013 , 435, 176-185	9.6	65
1345	NH ₂ -MIL-53(Al) and NH ₂ -MIL-101(Al) in sulfur-containing copolyimide mixed matrix membranes for gas separation. 2013 , 111, 72-81		129
1344	Evaluating the CO ₂ -capturing efficacy of amine and carboxylic acid motifs: ab initio studies on thermodynamic versus kinetic properties. 2013 , 69, 6693-6697		9
1343	Dense film polyimide membranes for aggressive sour gas feed separations. <i>Journal of Membrane Science</i> , 2013 , 428, 608-619	9.6	97
1342	Advances in Hydrogen Separation and Purification with Membrane Technology. 2013 , 245-268		20
1341	Development of computational methodologies for metal-organic frameworks and their application in gas separations. 2013 , 113, 8261-323		394
1340	Embedding dopamine nanoaggregates into a poly(dimethylsiloxane) membrane to confer controlled interactions and free volume for enhanced separation performance. 2013 , 1, 3713		76
1339	Preparation and characterization of polyimide-silica composite membranes and their derived carbon-silica composite membranes for gas separation. 2013 , 220, 441-451		56
1338	Excellent oxygen permselectivity of fluorine-containing poly(trimethylsilyldiphenylacetylene)s prepared by direct alkylation of perfluorodecyl groups in membrane state. 2013 , 54, 2231-2234		15
1337	Alkyl imidazolium-functionalized cardo-based poly(ether ketone)s as novel polymer membranes for O ₂ /N ₂ and CO ₂ /N ₂ separations. 2013 , 54, 3534-3541		34
1336	Nanocomposite membranes for membrane reactors. 2013 , 218-242		
1335	Mixed matrix membranes based on polyetherurethane and polyesterurethane containing silica nanoparticles for separation of CO ₂ /CH ₄ gases. 2013 , 116, 1-12		64
1334	Polysulfone acrylate membranes containing functionalized mesoporous MCM-41 for CO ₂ separation. <i>Journal of Membrane Science</i> , 2013 , 436, 145-153	9.6	55
1333	Current challenges in membrane separation of CO ₂ from natural gas: A review. 2013 , 17, 46-65		254
1332	Polymeric membranes incorporated with metal/metal oxide nanoparticles: A comprehensive review. 2013 , 308, 15-33		654

1331	Preparation and characterization of polyvinylchloride based mixed matrix membrane filled with multi walled carbon nano tubes for carbon dioxide separation. 2013 , 19, 347-352		36
1330	Polymeric mixed matrix membranes containing zeolites as a filler for gas separation applications: A review. 2013 , 19, 375-393		428
1329	Gas permeation parameters of mixed matrix membranes based on the polymer of intrinsic microporosity PIM-1 and the zeolitic imidazolate framework ZIF-8. <i>Journal of Membrane Science</i> , 2013 , 427, 48-62	9.6	276
1328	Preparation and characterization of polyvinyl acetate/zeolite 4A mixed matrix membrane for gas separation. <i>Journal of Membrane Science</i> , 2013 , 427, 73-84	9.6	70
1327	Seeded growth, silylation, and organic/water separation properties of MCM-48 membranes. <i>Journal of Membrane Science</i> , 2013 , 427, 293-302	9.6	12
1326	Metal organic framework based mixed matrix membranes: An increasingly important field of research with a large application potential. 2013 , 166, 67-78		399
1325	Correlation of Gas Permeability and Diffusivity with Selectivity: Orientations of the Clouds of the Data Points and the Effects of Temperature. 2013 , 52, 8864-8874		26
1324	Reducing NO(x) emissions from a nitric acid plant of domestic petrochemical complex: enhanced conversion in conventional radial-flow reactor of selective catalytic reduction process. 2013 , 34, 2867-79		2
1323	Polymeric Membranes for Energy Applications. 2013 , 1		1
1322	Inverse Gas Chromatographic Study of Sorption Thermodynamics in Thermally Rearranged Polymer Based on 2,2-Bis(3-amino-4-hydroxyphenyl)-hexafluoropropane and 4,4'-Hexafluoroisopropylidene Diphthalic Anhydride. 2013 , 52, 10467-10475		11
1321	Sorption and Diffusion of n-Alkyl Acetates in Poly(methyl acrylate)/Silica Nanocomposites. 2013 , 46, 856-866		7
1320	CO2 Selective Separation Membranes. 2013 , 259-309		
1319	Correlation of Gas Permeability in a Metal-Organic Framework MIL-101(Cr)-Polysulfone Mixed-Matrix Membrane with Free Volume Measurements by Positron Annihilation Lifetime Spectroscopy (PALS). 2013 , 3, 331-53		57
1318	Synthesis and Gas Transport Properties of Hyperbranched Polyimide/Silica Hybrid/Composite Membranes. 2013 , 5, 1362-1379		14
1317	Crystallization Behavior of Polyamide 6 Prepared from a Phenol/Dichloroethane Mixed Solvent. 2013 , 834-836, 272-275		
1316	Kinetically Controlled Porosity in a Robust Organic Cage Material. 2013 , 125, 3834-3837		40
1315	Analytical Expressions for Steady-State Concentrations of Substrate and Oxidized and Reduced Mediator in an Amperometric Biosensor. 2013 , 2013, 1-12		3
1314	Synthesis and characterization of Thermally Rearranged (TR) polymers: influence of ortho-positioned functional groups of polyimide precursors on TR process and gas transport properties. 2013 , 1, 262-272		77

1313	Effect of air gap on gas permeance/selectivity performance of BTDA-TDI/MDI copolyimide hollow fiber membranes. 2013 , 130, n/a-n/a		1
1312	Oxygen/Nitrogen Separation. 2013 , 1		1
1311	Experimental investigation and simulation of hollow fiber membrane process for SF6 recovery from GIS. 2013 , 24, 997-1004		10
1310	Synthesis, characterization, and evaluation of novel polyhydantoins as gas separation membranes. 2013 , 51, 4052-4060		3
1309	Synthesis and Characterization of Polybenzoxazinone and its Prepolymer Using Gas Separation. 2013 , 214, 2867-2874		13
1308	Swelling of Ultrathin Molecular Layer-by-Layer Polyamide Water Desalination Membranes. 2013 , 51, 1647-1655		29
1307	Solvent-Resistant Nanofiltration Membranes. 2013 , 1		3
1306	Ionic Liquids in Gas Separation Membranes. 2013 , 1		2
1305	Carbon Membranes. 2013 , 1		
1304	Polymers of Intrinsic Microporosity. 2013 , 1		
1303	Gastrennung durch Polymermembranen: jenseits der Grenze. 2013 , 125, 5082-5084		2
1302	Preparation, characterization and gas permeation study of PSf/MgO nanocomposite membrane. 2013 , 30, 589-597		51
1301	Effects of Aluminosilicate Mineral Nano-Clay Fillers on Polysulfone Mixed Matrix Membrane for Carbon Dioxide Removal. 2014 , 69,		
1300	. 2014 ,		8
1299	21. Wanderung von Teilchen im Konzentrationsgradienten (Diffusion). 2014 , 391-408		
1298	Effect of relative humidity and temperature on gas transport in Matrimid® : Experimental study and modeling. <i>Journal of Membrane Science</i> , 2014 , 471, 392-401	9.6	29
1297	Supported ionic liquid membranes for separations of gases and liquids: an overview. 2014 , 54, 595-607		17
1296	Separation of Gases Using Membranes Containing Ionic Liquids. 2014 , 261-273		6

1295	Polyimide-silica sol-gel membranes from a novel alkoxy silane functionalized polyimide: preparation, characterization and gas separation properties. 2014 , 72, 464-479	3
1294	Hybrid gas separation polymeric membranes containing nanoparticles. 2014 , 54, 637-651	22
1293	New membrane materials based on crosslinked poly(ethylene glycols) and ionic liquids for separation of gas mixtures containing CO ₂ . 2014 , 56, 900-908	6
1292	Metal-Organic Frameworks: Frameworks in Mixed-Matrix Membranes. 2014 , 1-15	2
1291	Development of Mixed Matrix Membranes Containing Zeolites for Post-combustion Carbon Capture.. 2014 , 63, 160-166	38
1290	Fabrication and Characterization of Facilitated Transport Membrane for Gas Separation. 2014 , 625, 533-536	2
1289	Preparation and Characterization of Newly Developed Polysulfone/Polyethersulfone Blend Membrane for CO ₂ Separation. 2014 , 699, 325-330	8
1288	Preparation, characterization, and applicability of novel calix[4]arene-based cellulose acetate membranes in gas permeation. 2014 , 131, n/a-n/a	18
1287	Gas transport properties of novel mixed matrix membranes made of titanate nanotubes and PBI or PPO. 2014 , 1-9	7
1286	Investigation of the chemical and morphological structure of thermally rearranged polymers. 2014 , 55, 6649-6657	23
1285	Atomistic modeling toward high-efficiency carbon capture: A brief survey with a few illustrative examples. 2014 , 114, 163-175	14
1284	Insights into the Chain and Local Mobility of Some Aromatic Polyamides and Their Influence on the Physicochemical Properties. 2014 , 215, 1573-1587	18
1283	Triptycene induced enhancement of membrane gas selectivity for microporous Tröger's base polymers. 2014 , 26, 3526-31	265
1282	Aromatic Hyperbranched Polymers: Synthesis and Application. 2014 , 27-124	7
1281	Gas Permeation Properties and Characterization of Polymer Based Carbon Membrane. 2014 , 983, 246-250	
1280	Designing block copolymer architectures for targeted membrane performance. 2014 , 55, 347-353	89
1279	Facilitated transport in hydroxide-exchange membranes for post-combustion CO ₂ separation. 2014 , 7, 114-6	13
1278	Solubility controlled permeation of hydrocarbons: New membrane materials and results. <i>Journal of Membrane Science</i> , 2014 , 453, 532-545	9.6 73

1277	Molecular modeling of MOF and ZIF-filled MMMs for CO ₂ /N ₂ separations. <i>Journal of Membrane Science</i> , 2014 , 454, 407-417	9.6	36
1276	Effect of different metal in situ growing routes on the morphology and gas separation properties of polyetherimide/palladium nanocomposite asymmetric membranes. 2014 , 129, 41-49		10
1275	NELF predictions of a solubility selectivity upper bound. <i>Journal of Membrane Science</i> , 2014 , 455, 247-253	9.6	14
1274	Facile synthesis of five 2D surface modifiers by highly selective photocyclic aromatization and efficient enhancement of oxygen permselectivities of three polymer membranes by surface modification using a small amount of the 2D surface modifiers. 2014 , 55, 1384-1396		12
1273	Macroinitiator-mediated photoreactive coating of membrane surfaces with antifouling hydrogel layers. <i>Journal of Membrane Science</i> , 2014 , 455, 207-218	9.6	49
1272	Visualizing MOF Mixed Matrix Membranes at the Nanoscale: Towards Structure-Performance Relationships in CO ₂ /CH ₄ Separation Over NH ₂ -MIL-53(Al)@PI. 2014 , 24, 249-256		236
1271	Fundamental water and salt transport properties of polymeric materials. 2014 , 39, 1-42		450
1270	Fabrication and characterization of polymer blends consisting of cationic polyallylamine and anionic polyvinyl alcohol. 2014 , 20, 957-967		46
1269	Comparative permeation studies on three supported membranes: Pure ZIF-8, pure polymethylphenylsiloxane, and mixed matrix membranes. 2014 , 189, 210-215		42
1268	Effect of modified attapulgite addition on the performance of a PVDF ultrafiltration membrane. 2014 , 344, 71-78		55
1267	Mixed matrix membranes comprising MOFs and porous silicate fillers prepared via spin coating for gas separation. 2014 , 107, 66-75		74
1266	Predictive simulations of the structural and adsorptive properties for PIM-1 variations. 2014 , 40, 599-609		15
1265	Mechanistic insight into highly efficient gas permeation and separation in a shape-persistent ladder polymer membrane. 2014 , 16, 6075-83		38
1264	The rheology of suspensions of porous zeolite particles in polymer solutions. 2014 , 53, 133-141		5
1263	Formation of defect-free 6FDA-DAM asymmetric hollow fiber membranes for gas separations. <i>Journal of Membrane Science</i> , 2014 , 459, 223-232	9.6	49
1262	Separation of CO ₂ /CH ₄ through alumina-supported geminal ionic liquid membranes. <i>Journal of Membrane Science</i> , 2014 , 455, 229-235	9.6	45
1261	Boehmite-phenolic resin carbon molecular sieve membranes Permeation and adsorption studies. 2014 , 92, 2668-2680		30
1260	Pressure ratio and its impact on membrane gas separation processes. <i>Journal of Membrane Science</i> , 2014 , 463, 33-40	9.6	104

1259	Mixed matrix membranes comprising silica-(ZIF-8) core-shell spheres with ordered mesoporous microporosity for natural- and bio-gas upgrading. <i>Journal of Membrane Science</i> , 2014 , 452, 184-192 ^{9.6}	90
1258	Carbon composite membrane derived from a two-dimensional zeolitic imidazolate framework and its gas separation properties. 2014 , 72, 242-249	43
1257	Mixed matrix membranes of Pebax-1657 loaded with 4A zeolite for gaseous separations. 2014 , 129, 1-8	206
1256	Cross-linked ionic resins and gels from epoxide-functionalized imidazolium ionic liquid monomers. 2014 , 55, 3305-3313	54
1255	Novel thermally stable and soluble triarylamine functionalized polyimides for gas separation. 2014 , 5, 4219	35
1254	Synthesis and characterization of fluorene-based polybenzimidazole copolymer for gas separation. 2014 , 131, n/a-n/a	8
1253	Highly size-selective ionically crosslinked multilayer polymer films for light gas separation. 2014 , 26, 746-51	44
1252	Integrated membrane material and process development for gas separation. 2014 , 4, 54-61	29
1251	Intrinsically Microporous Soluble Polyimides Incorporating Tröger's Base for Membrane Gas Separation. 2014 , 47, 3254-3262	185
1250	Acetate-Functional Thermally Rearranged Polyimides Based on 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane and Various Dianhydrides for Gas Separations. 2014 , 53, 871-879	24
1249	Soft polymeric nanoparticle additives for next generation gas separation membranes. 2014 , 2, 4999	60
1248	Enhancement of CO Affinity in a Polymer of Intrinsic Microporosity by Amine Modification. 2014 , 47, 1021-1029	168
1247	Preparation of polyphenylsulfone containing imidazole group for gas separation membrane material. 2014 , 26, 401-407	3
1246	State-of-the-art membrane based CO ₂ separation using mixed matrix membranes (MMMs): An overview on current status and future directions. 2014 , 39, 817-861	605
1245	Tröger's base-based copolymers with intrinsic microporosity for CO ₂ separation and effect of Tröger's base on separation performance. 2014 , 5, 2793-2800	88
1244	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	9.6 132
1243	Synthesis, characterization, and gas transport properties of novel iptycene-based poly[bis(benzimidazobenzisoquinolinones)]. 2014 , 55, 102-109	22
1242	Ionic Liquid Membrane Technology. 2014 , 87-116	2

1241	Molecular Modeling and Gas Permeation Properties of a Polymer of Intrinsic Microporosity Composed of Ethanoanthracene and Tripterin Base Units. 2014 , 47, 7900-7916	84
1240	The effect of incorporating ionic liquid into polyethersulfone-SAPO34 based mixed matrix membrane on CO ₂ gas separation performance. 2014 , 135, 252-258	54
1239	Microporous Polyimides with Rationally Designed Chain Structure Achieving High Performance for Gas Separation. 2014 , 47, 7477-7483	103
1238	Pristine and thermally-rearranged gas separation membranes from novel o-hydroxyl-functionalized spirobifluorene-based polyimides. 2014 , 5, 6914-6922	61
1237	A Review on Glassy Polymeric Membranes for Gas Separation. 2014 , 625, 701-703	9
1236	Gas separation performance of carbon molecular sieve membranes based on 6FDA-mPDA/DABA (3:2) polyimide. 2014 , 7, 1186-94	74
1235	In Situ Synthesis and Characterization of 2,2'-Methylenebis(6-tert-butyl-4-ethylphenol)-Incorporated Polymeric Membranes. 2014 , 33,	3
1234	Gas Permeability of Hexaphenylbenzene Based Polymers of Intrinsic Microporosity. 2014 , 47, 8320-8327	70
1233	Effect of Isomerism on Molecular Packing and Gas Transport Properties of Poly(benzoxazole-co-imide)s. 2014 , 47, 7947-7957	63
1232	Novel polyoxadiazoles with non-coplanar ortho-linked structures as highly CO ₂ permselective membranes. 2014 , 4, 17993-18002	5
1231	Continuous polycrystalline ZIF-8 membrane supported on CO ₂ -selective mixed matrix supports for CO ₂ /CH ₄ separation. 2014 , 4, 52461-52466	13
1230	Computational exploration of a Zr-carboxylate based metal-organic framework as a membrane material for CO ₂ capture. 2014 , 2, 1657-1661	53
1229	Silylated mesoporous silica membranes on polymeric hollow fiber supports: synthesis and permeation properties. 2014 , 6, 17877-86	18
1228	A preferable molecular crystal membrane for H ₂ gas separation. 2014 , 50, 5662-4	3
1227	Efficient CO ₂ capture by humidified polymer electrolyte membranes with tunable water state. 2014 , 7, 1489	105
1226	Tuning Gas Permeability and Selectivity Properties by Thermal Modification of the Side Groups of Poly(oxindolebiphenylene)s Membranes. 2014 , 53, 15755-15762	4
1225	Production of mixed matrix hollow fiber membrane for CO ₂ /CH ₄ separation. 2014 , 137, 1-12	37
1224	Stimuli-responsive buckling mechanics of polymer films. 2014 , 52, 1441-1461	86

1223	Magnetic Mixed Matrix Membranes Consisting of PPO Matrix and Magnetic Filler in Gas Separation. 2014 , 49, 1729-1735		20
1222	Mass Transport in Hybrid PTMSP/Silica Membranes. 2014 , 53, 9243-9255		11
1221	New perfluoro-dioxolane-based membranes for gas separations. <i>Journal of Membrane Science</i> , 2014 , 471, 412-419	9.6	44
1220	Synthesis, structural characterization and properties of novel functional poly(ether imide)/titania nanocomposite thin films. 2014 , 55, 6252-6260		27
1219	Transport diffusivity of propane and propylene inside SWNTs from equilibrium molecular dynamics simulations. 2014 , 16, 24697-703		6
1218	Physical aging in carbon molecular sieve membranes. 2014 , 80, 155-166		78
1217	Phase behavior and permeability of Alkyl-Methyl-Imidazolium Tricyanomethanide ionic liquids supported in nanoporous membranes. 2014 , 135, 22-34		14
1216	Controlled thermal oxidative crosslinking of polymers of intrinsic microporosity towards tunable molecular sieve membranes. 2014 , 5, 4813		199
1215	Analysis of the Water Permeability of Linde Type A Zeolites in Reverse Osmosis. 2014 , 49, 2824-2833		6
1214	Carbon dioxide permeation study through carbon hollow fiber membranes at pressures up to 55 bar. 2014 , 134, 158-162		11
1213	Synthesis, characterization and gas transport properties of novel poly(amine-imide)s containing tetraphenylmethane pendant groups. 2014 , 2, 9835-9843		22
1212	Thermally Rearrangeable PIM-Polyimides for Gas Separation Membranes. 2014 , 47, 5595-5606		95
1211	Amorphous PAF-1: Guiding the Rational Design of Ultraporous Materials. 2014 , 118, 19712-19722		34
1210	Bicontinuous zeolitic imidazolate framework ZIF-8@GO membrane with enhanced hydrogen selectivity. 2014 , 136, 14686-9		220
1209	Enhanced CO ₂ permeability of membranes by incorporating polyzwitterion@CNT composite particles into polyimide matrix. 2014 , 6, 13051-60		66
1208	Synthesis, oxidation and crosslinking of tetramethyl bisphenol F (TMBPF)-based polymers for oxygen/nitrogen gas separations. 2014 , 55, 5623-5634		11
1207	Helium Recovery by Membrane Gas Separation Using Poly(o-acyloxyamide)s. 2014 , 53, 12809-12818		16
1206	Gas Separation Membrane Materials: A Perspective. 2014 , 47, 6999-7013		717

1205	Synthesis and characterization of triptycene-based polyimides with tunable high fractional free volume for gas separation membranes. 2014 , 2, 13309-13320		144
1204	Synthesis of cardo-polymers using Tröger's base formation. 2014 , 5, 5255		52
1203	Synthesis and characterization of a layered-hybrid membrane consisting of an organosilica separation layer on a polymeric nanofiltration membrane. <i>Journal of Membrane Science</i> , 2014 , 472, 19-28	9.6	19
1202	Blending of TiO ₂ nanoparticles with cellulose acetate polymer: to study the effect on morphology and gas permeation of blended membranes. 2014 , 9, n/a-n/a		3
1201	Facilitated transport mixed matrix membranes incorporated with amine functionalized MCM-41 for enhanced gas separation properties. <i>Journal of Membrane Science</i> , 2014 , 465, 78-90	9.6	163
1200	Improved thiophene solution selectivity by Cu ²⁺ , Pb ²⁺ and Mn ²⁺ ions in pervaporative poly[bis(p-methyl phenyl) phosphazene]desulfurization membrane. <i>Journal of Membrane Science</i> , 2014 , 454, 463-469	9.6	32
1199	Influence of polybenzimidazole main chain structure on H ₂ /CO ₂ separation at elevated temperatures. <i>Journal of Membrane Science</i> , 2014 , 461, 59-68	9.6	70
1198	Breaking through tradeoff of Polysulfone ultrafiltration membranes by zeolite 4A. 2014 , 186, 113-120		33
1197	CO ₂ -selective membranes for hydrogen production and CO ₂ capture [Part I: Membrane development. <i>Journal of Membrane Science</i> , 2014 , 457, 149-161	9.6	110
1196	Influence of Diffusivity and Sorption on Helium and Hydrogen Separations in Hydrocarbon, Silicon, and Fluorocarbon-Based Polymers. 2014 , 47, 3170-3184		50
1195	Gas transport through nanocomposite membrane composed by polyethylene with dispersed graphite nanoplatelets. <i>Journal of Membrane Science</i> , 2014 , 463, 196-204	9.6	51
1194	Acid- and base-stable porous organic cages: shape persistence and pH stability via post-synthetic "tying" of a flexible amine cage. 2014 , 136, 7583-6		142
1193	Enhanced desulfurization performance of PDMS membranes by incorporating silver decorated dopamine nanoparticles. 2014 , 2, 12907		31
1192	Controlling the crystallization of porous organic cages: molecular analogs of isoreticular frameworks using shape-specific directing solvents. 2014 , 136, 1438-48		94
1191	Mixed matrix membranes with strengthened MOFs/polymer interfacial interaction and improved membrane performance. 2014 , 6, 5609-18		132
1190	Structural and transport properties of polydimethylsiloxane based polyurethane/silica particles mixed matrix membranes for gas separation. 2014 , 31, 841-848		16
1189	Energy efficiency of oxygen enriched air production technologies: Cryogeny vs membranes. 2014 , 125, 142-150		69
1188	A highly permeable polyimide with enhanced selectivity for membrane gas separations. 2014 , 2, 4874-4877		137

1187	Feasibility of Mixed Matrix Membrane Gas Separations Employing Porous Organic Cages. 2014 , 118, 1523-1529	72
1186	Estimating gas permeability and permselectivity of microporous polymers. <i>Journal of Membrane Science</i> , 2014 , 468, 259-268	9.6 30
1185	Performance and plasticization behavior of polymer/MOF membranes for gas separation at elevated pressures. <i>Journal of Membrane Science</i> , 2014 , 470, 166-177	9.6 175
1184	Influence of TiO ₂ Nanoparticles on the Morphological, Thermal and Solution Properties of PVA/TiO ₂ Nanocomposite Membranes. 2014 , 39, 6805-6814	59
1183	Poly(amide-6-b-ethylene oxide)/SAPO-34 mixed matrix membrane for CO ₂ separation. 2014 , 23, 227-234	96
1182	High pressure gas separation performance of mixed-matrix polymer membranes containing mesoporous Fe(BTC). <i>Journal of Membrane Science</i> , 2014 , 459, 33-44	9.6 128
1181	Mixed matrix membranes incorporated with cubic-MOF-5 for improved polyetherimide gas separation membranes: Theory and experiment. 2014 , 20, 3857-3868	71
1180	Gas sorption, diffusion, and permeation in thermally rearranged poly(benzoxazole-co-imide) membranes. <i>Journal of Membrane Science</i> , 2014 , 453, 556-565	9.6 36
1179	Electro-casting aligned MWCNTs/polystyrene composite membranes for enhanced gas separation performance. <i>Journal of Membrane Science</i> , 2014 , 462, 62-68	9.6 35
1178	Influence of polyimide precursor synthesis route and ortho-position functional group on thermally rearranged (TR) polymer properties: Pure gas permeability and selectivity. <i>Journal of Membrane Science</i> , 2014 , 463, 73-81	9.6 35
1177	Gas separation properties of poly(amide-6-b-ethylene oxide)/amino modified multi-walled carbon nanotubes mixed matrix membranes. <i>Journal of Membrane Science</i> , 2014 , 467, 41-47	9.6 131
1176	Sub-ambient temperature flue gas carbon dioxide capture via Matrimid® hollow fiber membranes. <i>Journal of Membrane Science</i> , 2014 , 465, 49-55	9.6 33
1175	Enhanced CO ₂ carrier activity of potassium cation with fluorosilicate anions for facilitated transport membranes. <i>Journal of Membrane Science</i> , 2014 , 466, 357-360	9.6 19
1174	Mixed matrix membranes based on NH ₂ -functionalized MIL-type MOFs: Influence of structural and operational parameters on the CO ₂ /CH ₄ separation performance. 2014 , 192, 35-42	110
1173	Tröger's Base-Based Microporous Polyimide Membranes for High-Performance Gas Separation.. 2014 , 3, 597-601	138
1172	Polymeric molecular sieve membranes via in situ cross-linking of non-porous polymer membrane templates. 2014 , 5, 3705	118
1171	New CO ₂ separation membranes containing gas-selective Cu-MOFs. <i>Journal of Membrane Science</i> , 2014 , 467, 67-72	9.6 18
1170	Microporous Organic Polymers: Synthesis, Types, and Applications. 2014 , 125-164	2

1169	Improvement in CO ₂ /H ₂ separation by fabrication of poly(ether-b-amide6)/glycerol triacetate gel membranes. <i>Journal of Membrane Science</i> , 2014 , 469, 43-58	9.6	71
1168	Fabrication of an Asymmetric 4,4'-Oxydiphthalic Anhydride/4,6-Trimethyl-1,3-phenylenediamine/2,6-Diaminotoluene Copolyimide Hollow Fiber Membrane and Its Performance for CO ₂ Separation. 2014 , 53, 4442-4452		7
1167	Advancing adsorption and membrane separation processes for the gigaton carbon capture challenge. 2014 , 5, 479-505		63
1166	The role of layered silicate loadings and their dispersion states on the gas separation performance of mixed matrix membrane. <i>Journal of Membrane Science</i> , 2014 , 468, 20-30	9.6	54
1165	Mixed Matrix Hollow Fiber Membranes with enhanced gas permeation properties. 2014 , 132, 336-345		30
1164	Pressure-vacuum swing permeation: A novel process mode for membrane separation of gases. 2014 , 125, 301-310		8
1163	Thermally rearranged polybenzoxazoles membranes with biphenyl moieties: Monomer isomeric effect. <i>Journal of Membrane Science</i> , 2014 , 450, 369-379	9.6	64
1162	Separation of NF ₃ and CF ₄ using amorphous glassy perfluoropolymer Teflon AF and Hyflon AD60 membranes. <i>Journal of Membrane Science</i> , 2014 , 462, 75-87	9.6	17
1161	Highly Efficient Helix-sense-selective Polymerization of an Achiral Phenylacetylene Having a Bulky Group. 2015 , 44, 1777-1779		1
1160	Recent Developments in Membrane Technologies for CO ₂ Separation. 2015 , 85-133		1
1159	Synthesis of a Fluorine-Containing Cis-Cisoidal One-Handed Helical Polyphenylacetylene and Application of Highly Selective Photocyclic Aromatization Product on Oxygen Permselective Membrane. 2015 , 27, 459-63		8
1158	A highly selective polybenzimidazole-4,4'-(hexafluoroisopropylidene)bis(benzoic acid) membrane for high-temperature hydrogen separation. 2015 , 132, n/a-n/a		10
1157	Synthesis and gas permeability of ABA-type triblock copolymers derived from fluorine-containing polyimide with polyhedral oligomeric silsesquioxane. 2015 , 64, 1209-1218		16
1156	Effect of Cross-Link Density on Carbon Dioxide Separation in Polydimethylsiloxane-Norbornene Membranes. 2015 , 8, 3595-604		16
1155	Mixed matrix membranes based on 6FDA polyimide with silica and zeolite microsphere dispersed phases. 2015 , 61, 4481-4490		47
1154	Ethylene vinyl acetate/poly(ethylene glycol) blend membranes for CO ₂ /N ₂ separation. 2015 , 5, 668-681		11
1153	Development and Application of Novel Hollow-fiber Carbon Membranes Derived from Poly(phenylene oxide). 2015 , 58, 33-39		3
1152	Effects of Thermal Treatment and Physical Aging on the Gas Transport Properties in Matrimid . 2015 , 70, 367-379		20

1151	Enhancing the CO ₂ separation performance of composite membranes by the incorporation of amino acid-functionalized graphene oxide. 2015 , 3, 6629-6641		118
1150	Enhanced Gas Permeation through Graphene Nanocomposites. 2015 , 119, 13700-13712		62
1149	Fluorinated Polyimides: Synthesis, Properties, and Applications. 2015 , 97-185		8
1148	Polymer-graphene oxide quadlayer thin-film assemblies with improved gas barrier. 2015 , 31, 5919-27		60
1147	Pure- and mixed-gas propylene/propane permeation properties of spiro- and triptycene-based microporous polyimides. <i>Journal of Membrane Science</i> , 2015 , 492, 116-122	9.6	45
1146	Porous Carbons [Hyperbranched Polymers [Polymer Solvation. 2015 ,		2
1145	Comparison of silica and novel functionalized silica-based cellulose acetate hybrid membranes in gas permeation study. 2015 , 22, 1		15
1144	The optimal point within the Robeson upper boundary. 2015 , 97, 109-119		10
1143	Effect of bulky groups on gas transport properties of semifluorinated poly(ether amide)s containing pyridine moiety. 2015 , 66, 419-428		17
1142	A generic transport model for separation of gas mixtures by glassy polymer membranes based on Maxwell-Stefan formulation. 2015 , 5, 48207-48216		11
1141	Synthesis of cross-linked amides and esters as thin film composite membrane materials yields permeable and selective material for water vapor/gas separation. 2015 , 3, 7888-7899		37
1140	Water permeability and competitive permeation with CO ₂ and CH ₄ in perfluorinated polymeric membranes. 2015 , 147, 203-209		31
1139	Improving Gas Separation Performance of Poly(vinylidene fluoride) Based Mixed Matrix Membranes Containing Metal-Organic Frameworks by Chemical Modification. 2015 , 54, 12124-12134		52
1138	Gas separation membranes made through thermal rearrangement of ortho-methoxypolyimides. 2015 , 5, 102261-102276		17
1137	Constructing CO ₂ transport passageways in Matrimid [membranes using nanohydrogels for efficient carbon capture. <i>Journal of Membrane Science</i> , 2015 , 474, 156-166	9.6	37
1136	Membrane processes and renewable energies. 2015 , 43, 1343-1398		55
1135	Gas transport properties of new aromatic polyimides based on 3,8-diphenylpyrene-1,2,6,7-tetracarboxylic dianhydride. <i>Journal of Membrane Science</i> , 2015 , 476, 442-448	9.6	33
1134	Enhanced CO ₂ transport properties of membranes by embedding nano-porous zeolite particles into Matrimid [5218 matrix. 2015 , 5, 8552-8565		85

1133	Enhanced pervaporation performance of MIL-101 (Cr) filled polysiloxane hybrid membranes in desulfurization of model gasoline. 2015 , 135, 479-488		56
1132	Morphology Control of Polysulfone Membranes in Filtration Processes: a Critical Review. 2015 , 2, 22-43		38
1131	Penttiptycene-based polyimides with hierarchically controlled molecular cavity architecture for efficient membrane gas separation. <i>Journal of Membrane Science</i> , 2015 , 480, 20-30	9.6	68
1130	Elevated pervaporation performance of polysiloxane membrane using channels and active sites of metal organic framework CuBTC. <i>Journal of Membrane Science</i> , 2015 , 481, 73-81	9.6	42
1129	Nano-heat-sink thin film composite of PC/three-dimensional networked nano-fumed silica with exquisite hydrophobicity. 2015 , 5, 4376-4384		11
1128	Encapsulated liquid sorbents for carbon dioxide capture. 2015 , 6, 6124		130
1127	Prediction of gas permeability coefficients of copolyimides by group contribution methods. <i>Journal of Membrane Science</i> , 2015 , 480, 47-63	9.6	12
1126	Effect of methanol treatment on gas sorption and transport behavior of intrinsically microporous polyimide membranes incorporating Tröger's base. <i>Journal of Membrane Science</i> , 2015 , 480, 104-114	9.6	59
1125	Structure-performance characterization for carbon molecular sieve membranes using molecular scale gas probes. 2015 , 85, 429-442		45
1124	Efficient CO ₂ capture by functionalized graphene oxide nanosheets as fillers to fabricate multi-permselective mixed matrix membranes. 2015 , 7, 5528-37		255
1123	A new combinatorial method for synthesizing, screening, and discovering antifouling surface chemistries. 2015 , 7, 2385-92		26
1122	Synthesis and Effect of Physical Aging on Gas Transport Properties of a Microporous Polyimide Derived from a Novel Spirobifluorene-Based Dianhydride. 2015 , 4, 231-235		78
1121	Equation of State Modeling of the Solubility of CO ₂ /C ₂ H ₆ Mixtures in Cross-Linked Poly(ethylene oxide). 2015 , 54, 1142-1152		13
1120	Influence of confinement in mesoporous silica on diffusion of a mixture of carbon dioxide and an imidazolium-based ionic liquid by high field diffusion NMR. 2015 , 206, 177-183		20
1119	Improving CO ₂ /N ₂ separation performance using nonionic surfactant Tween containing polymeric gel membranes. 2015 , 5, 4947-4957		24
1118	Gas permeation and sorption properties of poly(amide-12-b-ethyleneoxide)(Pebax1074)/SAPO-34 mixed matrix membrane for CO ₂ /CH ₄ and CO ₂ /N ₂ separation. 2015 , 27, 223-239		93
1117	Trapping virtual pores by crystal retro-engineering. 2014 , 7, 153-9		49
1116	Water vapor and CO ₂ transport through amine-containing facilitated transport membranes. 2015 , 86, 111-116		36

1115	Gas Membranes for CO ₂ /CH ₄ (Biogas) Separation: A Review. 2015 , 32, 71-85		46
1114	The novel Elvaloy4170/functionalized multi-walled carbon nanotubes mixed matrix membranes: Fabrication, characterization and gas separation study. 2015 , 49, 220-228		40
1113	Gas permeability properties of gelatin/polyetheramine blend membranes made without organic solvent. 2015 , 142, 33-39		11
1112	Synthesis and oxygen permeation of novel polymers of phenylacetylenes having two hydroxyl groups via different lengths of spacers. 2015 , 56, 199-206		15
1111	Gas Separation by Membranes. 2015 , 557-584		4
1110	Membrane gas separation technologies for biogas upgrading. 2015 , 5, 24399-24448		228
1109	The effect of functionalized carbon nano-fiber (CNF) on gas separation performance of polysulfone (PSF) membranes. 2015 , 90, 41-48		39
1108	Mixed matrix membrane performance enhancement using alkanolamine solution. <i>Journal of Membrane Science</i> , 2015 , 483, 84-93	9.6	38
1107	Novel and processable polyimides with a N-benzonitrile side chain: thermal, mechanical and gas separation properties. 2015 , 5, 26040-26050		17
1106	Poly(vinylidene fluoride) based mixed matrix membranes comprising metal organic frameworks for gas separation applications. 2015 , 96, 87-102		77
1105	Metal-organic framework based mixed matrix membranes: a solution for highly efficient CO ₂ capture?. 2015 , 44, 2421-54		627
1104	Post-synthetic Ti exchanged UiO-66 metal-organic frameworks that deliver exceptional gas permeability in mixed matrix membranes. 2015 , 5, 7823		140
1103	Water and salt transport properties of zwitterionic polymers film. <i>Journal of Membrane Science</i> , 2015 , 491, 73-81	9.6	37
1102	Performance study of isoporous membranes with tailored pore sizes. <i>Journal of Membrane Science</i> , 2015 , 495, 334-340	9.6	43
1101	Anionic surfactant-doped Pebax membrane with optimal free volume characteristics for efficient CO ₂ separation. <i>Journal of Membrane Science</i> , 2015 , 493, 460-469	9.6	29
1100	CO ₂ facilitated transport membrane promoted by mimic enzyme. <i>Journal of Membrane Science</i> , 2015 , 494, 196-204	9.6	39
1099	Molecular simulations of porous coordination network-based mixed matrix membranes for CO ₂ /N ₂ separations. 2015 , 41, 1396-1408		9
1098	Preparation and characterization of nanocomposites with polyphenylene oxide. 2015 , 199-224		0

1097	Fixed-site-carrier facilitated transport of carbon dioxide through ionic-liquid-based epoxy-amine ion gel membranes. <i>Journal of Membrane Science</i> , 2015 , 492, 303-311	9.6	43
1096	Polymeric membranes for the purification of hydrogen. 2015 , 419-443		5
1095	Towards enhanced CO ₂ selectivity of the PIM-1 membrane by blending with polyethylene glycol. <i>Journal of Membrane Science</i> , 2015 , 493, 147-155	9.6	64
1094	Polymer functionalization to enhance interface quality of mixed matrix membranes for high CO ₂ /CH ₄ gas separation. 2015 , 3, 15202-15213		100
1093	Effect of Carbon Molecular Sieve (CMS) Concentration on Mixed Matrix Membranes (MMMs) Performance for Carbon Dioxide Removal. 2015 , 754-755, 869-873		11
1092	Membranes with artificial free-volume for biofuel production. 2015 , 6, 7529		31
1091	A bibliometric analysis of the Journal of Membrane Science (1976-2010). 2015 , 33, 698-713		17
1090	Thermal, mechanical and structural investigation of copolyimide-silica hybrids containing phosphine oxide. 2015 , 86, 108-116		3
1089	Mixed-Matrix Membranes with Metal-Organic Framework-Decorated CNT Fillers for Efficient CO ₂ Separation. 2015 , 7, 14750-7		96
1088	Fabrication and characterization of novel highly transparent and organo-soluble poly(ether imide)s thin film for gas separation. 2015 , 39, 4478-4487		14
1087	Synthesis and characterization of polybenzimidazoles derived from tetraaminodiphenylsulfone for high temperature gas separation membranes. 2015 , 71, 135-142		31
1086	Effect of fixed carbon molecular sieve (CMS) loading and various di-ethanolamine (DEA) concentrations on the performance of a mixed matrix membrane for CO ₂ /CH ₄ separation. 2015 , 5, 60814-60822		39
1085	Mixed-Matrix Membranes for CO ₂ /N ₂ Separation Comprising a Poly(vinylamine) Matrix and Metal-Organic Frameworks. 2015 , 54, 5139-5148		55
1084	Gas Transport Coefficients of Phthalide-Containing High-Tg Glassy Polymers Determined by Gas-Flux and NMR Measurements. 2015 , 48, 2585-2592		6
1083	Synthesis and characterization of novel polyamides containing dibenzobarrelene pendant groups. 2015 , 18, 350-359		9
1082	Cross-Linked Thermally Rearranged Poly(benzoxazole-co-imide) Membranes Prepared from ortho-Hydroxycopolyimides Containing Pendant Carboxyl Groups and Gas Separation Properties. 2015 , 48, 2603-2613		72
1081	Sod-ZMOF/Matrimid mixed matrix membranes for CO ₂ separation. <i>Journal of Membrane Science</i> , 2015 , 489, 81-89	9.6	32
1080	Characterization, permeation analysis and stability increasing of facilitated transport membranes through incorporation of bis(bipyridine) silver (II) peroxydisulfate. 2015 , 29, 199-216		1

1079	Influence of water vapor on the gas permeability of polymerized ionic liquids membranes. <i>Journal of Membrane Science</i> , 2015 , 487, 199-208	9.6	34
1078	Preparation of ALOOH/Al ₂ O ₃ porous ceramics having CO ₂ /N ₂ gas selectivity of less than 1. 2015 , 41, 7759-7765		1
1077	Novel piperazinium-mediated crosslinked polyimide membranes for high performance CO ₂ separation. <i>Journal of Membrane Science</i> , 2015 , 487, 90-98	9.6	19
1076	Polymeric films based on blends of 6FDA/FPDA polyimide plus several copolyfluorenes for CO ₂ separation. 2015 , 5, 41497-41505		8
1075	MOF-mixed matrix membranes: Precise dispersion of MOF particles with better compatibility via a particle fusion approach for enhanced gas separation properties. <i>Journal of Membrane Science</i> , 2015 , 492, 21-31	9.6	135
1074	Preparation of self-supported crystalline merlinoite-type zeolite W membranes through vacuum filtration and crystallization for CO ₂ /CH ₄ separations. 2015 , 39, 4135-4140		6
1073	A novel multi-armed and star-like poly(ethylene oxide) membrane for CO ₂ separation. <i>Journal of Membrane Science</i> , 2015 , 489, 258-263	9.6	41
1072	Fundamentals of Gas Permeation Through Membranes. 2015 , 11-35		6
1071	Next-generation pervaporation membranes. 2015 , 107-141		4
1070	Gas Separation Membrane Materials and Structures. 2015 , 37-192		8
1069	Gas Separation Membranes. 2015 ,		97
1068	Cryogenic air separation at low pressure using MFI membranes. <i>Journal of Membrane Science</i> , 2015 , 487, 135-140	9.6	10
1067	Metal-organic framework composite membranes: Synthesis and separation applications. 2015 , 135, 232-257		182
1066	Composite-alumina-carbon molecular sieve membranes prepared from novolac resin and boehmite. Part I: Preparation, characterization and gas permeation studies. 2015 , 40, 5653-5663		35
1065	Asymmetric hollow fiber membrane coated with polydimethylsiloxane/metal organic framework hybrid layer for gas separation. 2015 , 146, 85-93		44
1064	Effect of branched and cycloalkyl functionalities on CO ₂ separation performance of poly(IL) membranes. 2015 , 155, 89-95		21
1063	Thermally Rearranged Poly(benzoxazole-co-imide) Membranes with Superior Mechanical Strength for Gas Separation Obtained by Tuning Chain Rigidity. 2015 , 48, 2194-2202		87
1062	The polymeric upper bound for N ₂ /NF ₃ separation and beyond; ZIF-8 containing mixed matrix membranes. <i>Journal of Membrane Science</i> , 2015 , 486, 29-39	9.6	13

1061	Effect of Flow Configuration on Darcian and Forchheimer Permeabilities Determination in a Porous Composite Tube. 2015 ,		1
1060	A high-performance hydroxyl-functionalized polymer of intrinsic microporosity for an environmentally attractive membrane-based approach to decontamination of sour natural gas. 2015 , 3, 22794-22806		68
1059	Estimations of effective diffusivity of hollow fiber mixed matrix membranes. <i>Journal of Membrane Science</i> , 2015 , 495, 269-275	9.6	9
1058	Maximum power point tracking (MPPT) of a scale-up pressure retarded osmosis (PRO) osmotic power plant. 2015 , 158, 584-596		24
1057	New aromatic polyamides and polyimides having an adamantane bulky group. 2015 , 5, 23-31		29
1056	Enhanced propylene/propane separation by thermal annealing of an intrinsically microporous hydroxyl-functionalized polyimide membrane. <i>Journal of Membrane Science</i> , 2015 , 495, 235-241	9.6	58
1055	Dielectric and gas transport properties of highly fluorinated polyimides blends. 2015 , 27, 526-538		9
1054	Highly Permeable Benzotriptycene-Based Polymer of Intrinsic Microporosity. 2015 , 4, 912-915		130
1053	Ionic group-mediated crosslinked polyimide membranes for enhanced CO ₂ separation. 2015 , 5, 69907-69914		15
1052	Novel aromatic polyimides derived from 2,8-di(3-aminophenyl)dibenzofuran. Synthesis, characterization and evaluation of properties. 2015 , 5, 71052-71059		6
1051	Gas Separation Membranes Derived from High-Performance Immiscible Polymer Blends Compatibilized with Small Molecules. 2015 , 7, 18618-27		27
1050	De facto methodologies toward the synthesis and scale-up production of UiO-66-type metal-organic frameworks and membrane materials. 2015 , 44, 19018-40		129
1049	Carbon Nanotube/Brominated Poly(2,6-dimethyl-1,4-phenylene Oxide) Nanocomposite Membranes for CO ₂ /N ₂ Separation. 2015 , 164, 136-144		3
1048	Fine-Tuned Intrinsically Ultramicroporous Polymers Redefine the Permeability/Selectivity Upper Bounds of Membrane-Based Air and Hydrogen Separations. 2015 , 4, 947-951		223
1047	Relationship between polymer/filler interfaces in separation layers and gas transport properties of mixed matrix composite membranes. <i>Journal of Membrane Science</i> , 2015 , 495, 252-268	9.6	59
1046	Opportunities and challenges of MOF-based membranes in gas separations. 2015 , 152, 207-237		182
1045	Thermally rearranged polybenzoxazoles and poly(benzoxazole-co-imide)s from ortho-hydroxyamine monomers for high performance gas separation membranes. <i>Journal of Membrane Science</i> , 2015 , 493, 329-339	9.6	31
1044	Matrimid-based carbon tubular membrane: Effect of carbonization environment. 2015 , 32, 167-171		30

1043	A new polymer, poly(perfluoropropylvinyl ether) and its comparison with other perfluorinated membrane materials. <i>Journal of Membrane Science</i> , 2015 , 495, 431-438	9.6	19
1042	New Pebax [®] /zeolite Y composite membranes for CO ₂ capture from flue gas. <i>Journal of Membrane Science</i> , 2015 , 495, 415-423	9.6	77
1041	Predicting solvent effects on the structure of porous organic molecules. 2015 , 51, 15542-5		22
1040	Gas Permeation Study of Carbon Tubular Membrane by Manipulating Carbonization Temperature Profile. 2015 , 1112, 145-148		1
1039	Gas Permeation Performance of Poly(lactic acid) Asymmetric Membrane for O ₂ /N ₂ Separation. 2015 , 149-156		2
1038	Mixed matrix membranes composed of two-dimensional metal-organic framework nanosheets for pre-combustion CO ₂ capture: a relationship study of filler morphology versus membrane performance. 2015 , 3, 20801-20810		101
1037	Tunable Porosity through Cooperative Diffusion in a Multicomponent Porous Molecular Crystal. 2015 , 119, 22577-22586		13
1036	Amine-functionalized metal organic framework (NH ₂ -MIL-125(Ti)) incorporated sodium alginate mixed matrix membranes for dehydration of acetic acid by pervaporation. 2015 , 5, 99008-99017		35
1035	Synthesis and gas-separation properties of metathesis poly(3-fluoro-3-pentafluoroethyl-4,4-bis(trifluoromethyl)tricyclonene-7). 2015 , 55, 753-758		12
1034	Composite-alumina-carbon molecular sieve membranes prepared from novolac resin and boehmite. Part II: Effect of the carbonization temperature on the gas permeation properties. 2015 , 40, 3485-3496		41
1033	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	9.6	100
1032	Polymer-matrix nanocomposite membranes for water treatment. <i>Journal of Membrane Science</i> , 2015 , 479, 256-275	9.6	698
1031	Nanoporous membranes generated from self-assembled block polymer precursors: Quo Vadis?. 2015 , 132, n/a-n/a		51
1030	Effect of Monomer Structure on Curing Behavior, CO ₂ Solubility, and Gas Permeability of Ionic Liquid-Based Epoxy-Amine Resins and Ion-Gels. 2015 , 54, 4396-4406		34
1029	Predictive calculation of hydrogen and helium solubility in glassy and rubbery polymers. <i>Journal of Membrane Science</i> , 2015 , 475, 110-121	9.6	22
1028	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	9.6	79
1027	Amine-modified Mg-MOF-74/CPO-27-Mg membrane with enhanced H ₂ /CO ₂ separation. 2015 , 124, 27-36		114
1026	Rigid and microporous polymers for gas separation membranes. 2015 , 43, 1-32		304

1025	Aziridine-Functionalized Mesoporous Silica Membranes on Polymeric Hollow Fibers: Synthesis and Single-Component CO ₂ and N ₂ Permeation Properties. 2015 , 54, 4407-4413	35
1024	Novel carbon nano-fibers (CNF)/polysulfone (PSf) mixed matrix membranes for gas separation. 2015 , 22, 199-207	63
1023	PIM-1/graphene composite: A combined experimental and molecular simulation study. 2015 , 209, 126-134	43
1022	Mixed matrix membranes gas separation performance prediction using an analytical model. 2015 , 93, 710-719	9
1021	Upper bound of polymeric membranes for mixed-gas CO ₂ /CH ₄ separations. <i>Journal of Membrane Science</i> , 2015 , 475, 101-109	9.6 104
1020	Asymmetric membranes prepared with trifluoromethylphenylated poly(ether ether ketone) for gas separation. 2015 , 27, 10-18	10
1019	. 2016 ,	23
1018	Biomethane production by biogas with polymeric membrane module. 2016 , 465-482	3
1017	Polymeric Membranes for Gas Separation. 2016 ,	3
1016	Compatibilized Immiscible Polymer Blends for Gas Separations. 2016 , 9,	12
1015	Recent Advances on Carbon Molecular Sieve Membranes (CMSMs) and Reactors. 2016 , 4, 29	27
1014	Origins and Evolution of Inorganic-Based and MOF-Based Mixed-Matrix Membranes for Gas Separations. 2016 , 4, 32	28
1013	Ultem /ZIF-8 Mixed Matrix Membranes for Gas Separation: Transport and Physical Properties. 2016 , 19, 220-228	30
1012	Separations Versus Sustainability. 2016 , 35-65	1
1011	A Review on Chitosan Utilization in Membrane Synthesis. 2016 , 3, 134-158	33
1010	Metal Organic Framework Crystals in Mixed-Matrix Membranes: Impact of the Filler Morphology on the Gas Separation Performance. 2016 , 26, 3154-3163	185
1009	Highly permselective MIL-68(Al)/matrimid mixed matrix membranes for CO ₂ /CH ₄ separation. 2016 , 133, n/a-n/a	26
1008	Transport properties of gases through integrally skinned asymmetric composite membranes prepared from date pit powder and polysulfone. 2016 , 133,	7

1007	Porous Organic Cage Thin Films and Molecular-Sieving Membranes. 2016 , 28, 2629-37	209
1006	Gas transport properties in (6FDA-RTIL)-(6FDA-MDA) block copolyimides. 2016 , 133, n/a-n/a	7
1005	Microstructure relaxation process of polyhexafluoropropylene after swelling in supercritical carbon dioxide. 2016 , 133, n/a-n/a	13
1004	Mathematical modeling of the gas transport through PEBAX/(nonporous silica) nanocomposite membranes: Development based on Van Amerongen and Van Krevelen relations. 2016 , 170, 280-293	12
1003	Accessing Siloxane Functionalized Polynorbornenes via Vinyl-Addition Polymerization for CO ₂ Separation Membranes. 2016 , 5, 879-883	35
1002	Carbon Capture and Storage: introductory lecture. 2016 , 192, 9-25	30
1001	Role of Facilitated Transport Membranes and Composite Membranes for Efficient CO ₂ Capture [A Review]. 2016 , 3, 68-85	65
1000	Efficient separation of N ₂ and He at low temperature using MFI membranes. 2016 , 62, 2833-2842	13
999	Lessons Learned from the Use of Unconventional Materials for CO ₂ Capture. 2016 , 1, 3027-3035	1
998	Mixed matrix membranes prepared from non-dried MOFs for CO ₂ /CH ₄ separations. 2016 , 6, 114505-114512	17
997	Investigation of Carbon Nanotubes in Mixed Matrix Membranes for Gas Separation: A Review. 2016 , 3, 276-298	30
996	Membranes for CO ₂ Separation. 2016 , 237-292	1
995	New amorphous perfluoro polymers: perfluorodioxolane polymers for use as plastic optical fibers and gas separation membranes. 2016 , 27, 33-41	19
994	Synthesis of thin CrAPO-34 membranes by microwave-assisted secondary growth. 2016 , 51, 1476-1483	11
993	Effect of alkalinity on absorption capacity and selectivity of SO ₂ and H ₂ S over CO ₂ : Substituted benzoate-based ionic liquids as the study platform. 2016 , 297, 265-276	50
992	Advances in high permeability polymer-based membrane materials for CO ₂ separations. 2016 , 9, 1863-1890	475
991	Enhancing the Gas Permeability of Tröger's Base Derived Polyimides of Intrinsic Microporosity. 2016 , 49, 4147-4154	88
990	Fabrication of COF-MOF Composite Membranes and Their Highly Selective Separation of H ₂ /CO ₂ . 2016 , 138, 7673-80	311

989	High-molecular-weight polyvinylamine/piperazine glycinate membranes for CO ₂ capture from flue gas. <i>Journal of Membrane Science</i> , 2016 , 514, 376-384	9.6	68
988	Synthesis and characterization of rubbery/glassy blend membranes for CO ₂ /CH ₄ gas separation. 2016 , 23, 1		23
987	Structural characteristics and transport behavior of triptycene-based PIMs membranes: A combination study using ab initio calculation and molecular simulations. <i>Journal of Membrane Science</i> , 2016 , 514, 114-124	9.6	32
986	Matrix effect of mixed-matrix membrane containing CO ₂ -selective MOFs. 2016 , 133, n/a-n/a		23
985	Gas permeation and mechanical properties of thermally rearranged (TR) copolyimides. 2016 , 82, 378-391		46
984	Graphene Oxide Nanosheets Based Novel Facilitated Transport Membranes for Efficient CO ₂ Capture. 2016 , 55, 5403-5414		40
983	The role of compatibility between polymeric matrix and silane coupling agents on the performance of mixed matrix membranes: Polyethersulfone/MCM-41. <i>Journal of Membrane Science</i> , 2016 , 513, 20-32	9.6	88
982	Casting molecular channels through domain formation: high performance graphene oxide membranes for H ₂ /CO ₂ separation. 2016 , 4, 7560-7564		5
981	Finely Tuning the Free Volume Architecture in Iptycene-Containing Polyimides for Highly Selective and Fast Hydrogen Transport. 2016 , 49, 3395-3405		46
980	Progress in Applications of Polymer-Based Membranes in Gas Separation Technology. 2016 , 55, 1282-1298		27
979	Imidazole functionalized graphene oxide/PEBAX mixed matrix membranes for efficient CO ₂ capture. 2016 , 166, 171-180		104
978	Facile Preparation of Graphene Oxide Membranes for Gas Separation. 2016 , 28, 2921-2927		158
977	Fullerenols: Physicochemical properties and applications. 2016 , 44, 59-74		52
976	High performance post-modified polymers of intrinsic microporosity (PIM-1) membranes based on multivalent metal ions for gas separation. <i>Journal of Membrane Science</i> , 2016 , 514, 305-312	9.6	58
975	The Basics. 2016 , 1-90		1
974	Applications. 2016 , 217-254		
973	Spirobisindane-based polyimide as efficient precursor of thermally-rearranged and carbon molecular sieve membranes for enhanced propylene/propane separation. <i>Journal of Membrane Science</i> , 2016 , 520, 983-989	9.6	49
972	A critical review of free volume and occupied volume calculation methods. <i>Journal of Membrane Science</i> , 2016 , 518, 289-294	9.6	23

971	Advanced Materials and Membranes for Gas Separations: The UOP Approach. 2016 , 119-135		4
970	Polymeric Membranes for Gas and Vapor Separations. 2016 , 89-158		10
969	Toward an Understanding of the Microstructure and Interfacial Properties of PIMs/ZIF-8 Mixed Matrix Membranes. 2016 , 8, 27311-27321		73
968	A novel class of gas separation membrane based on organic ionic plastic crystals. 2016 , 52, 12940-12943		9
967	Gas transport properties and characterization of UV crosslinked poly(phenylene oxide-co-arylene ether ketone) copolymers. 2016 , 4, 16047-16056		4
966	Functionalized Pd-decorated and aligned MWCNTs in polycarbonate as a selective membrane for hydrogen separation. 2016 , 41, 23057-23066		29
965	Preparation and gas transport properties of triptycene-containing polybenzoxazole (PBO)-based polymers derived from thermal rearrangement (TR) and thermal cyclodehydration (TC) processes. 2016 , 4, 17050-17062		40
964	Mixed-Matrix Membranes Containing Carbon Nanotubes Composite with Hydrogel for Efficient CO Separation. 2016 , 8, 29044-29051		87
963	Pseudopeptide bioconjugate additives for CO ₂ separation membranes. 2016 , 65, 1464-1473		6
962	Triptycene dimethyl-bridgehead dianhydride-based intrinsically microporous hydroxyl-functionalized polyimide for natural gas upgrading. <i>Journal of Membrane Science</i> , 2016 , 520, 240-246	9.6	35
961	Review of polymers of intrinsic microporosity for hydrogen storage applications. 2016 , 41, 16944-16965		91
960	Molecular origins of fast and selective gas transport in pentiptycene-containing polyimide membranes and their physical aging behavior. <i>Journal of Membrane Science</i> , 2016 , 518, 100-109	9.6	43
959	Process modeling and optimization studies of high pressure membrane separation of CO ₂ from natural gas. 2016 , 33, 2998-3010		5
958	Time-dependent Local and Average Structural Evolution of β phase 239Pu-Ga Alloys. 2016 , 1, 3019-3025		1
957	The Role of Molecular Interactions in Controlling Methanol Diffusion in Polyimides: A Time-Resolved FTIR Spectroscopy Investigation. 2016 , 359, 44-53		1
956	Gas Permeability and Selectivity in Thermally Modified Poly(oxyindole biphenylene) Membranes Bearing a tert-Butyl Carbonate Group. 2016 , 55, 7012-7020		10
955	Azine-Linked Covalent Organic Framework (COF)-Based Mixed-Matrix Membranes for CO ₂ /CH ₄ Separation. 2016 , 22, 14467-70		126
954	Design of transdermal matrix patch containing ondansetron. 2016 , 46, 677-684		4

953	Pebax-1657 mixed matrix membrane containing surface modified multi-walled carbon nanotubes for gas separation. 2016 , 6, 79563-79577		57
952	Postextraction Separation, On-Board Storage, and Catalytic Conversion of Methane in Natural Gas: A Review. 2016 , 116, 11436-11499		104
951	Crosslinked MOF-polymer to enhance gas separation of mixed matrix membranes. <i>Journal of Membrane Science</i> , 2016 , 520, 941-950	9.6	78
950	Modeling the water permeability and water/salt selectivity tradeoff in polymer membranes. <i>Journal of Membrane Science</i> , 2016 , 520, 790-800	9.6	64
949	Synthesis, gas transport and dielectric properties of fluorinated poly(arylene ether)s based on decafluorobiphenyl. 2016 , 183, 279-287		16
948	Synthesis and characterization of high permeable PEBA membranes for CO ₂ /CH ₄ separation. 2016 , 35, 980-985		26
947	Interactions at the interface of polymer matrix-filler particle composites. 2016 , 103, 189-195		26
946	Incorporation of CO ₂ philic moieties into a TiO ₂ nanomembrane for preferential CO ₂ separation. 2016 , 6, 88664-88667		6
945	Mixed-matrix membranes comprising graphene-oxide nanosheets for CO ₂ /CH ₄ separation: A comparison between glassy and rubbery polymer matrices. 2016 , 58, 801-809		12
944	How do you write and present research well? 17Submit your manuscript to the journal you cite most. 2016 , 94, 2174-2178		0
943	Metal Organic Framework Mixed Matrix Membranes for CO ₂ Separation. 2016 ,		1
942	Techno-economical evaluation of membrane based biogas upgrading system: A comparison between polymeric membrane and carbon membrane technology. 2016 , 1, 222-234		56
941	An investigation of blended polymeric membranes and their gas separation performance. 2016 , 6, 102671-102679		6
940	Application of poly (amide-b-ethylene oxide)/zeolitic imidazolate framework nanocomposite membrane in gas separation. 2016 , 25, 977-990		6
939	Metalorganic frameworks for membrane-based separations. 2016 , 1,		434
938	The influence of uniform deformation of Ultem-1000 polyetherimide films on their mechanical and gas transport characteristics. 2016 , 56, 1074-1084		19
937	Gas permeation properties of thermally rearranged (TR) isomers and their aromatic polyimide precursors. <i>Journal of Membrane Science</i> , 2016 , 518, 88-99	9.6	16
936	Physical aging in glassy mixed matrix membranes; tuning particle interaction for mechanically robust nanocomposite films. 2016 , 4, 10627-10634		51

935	Facile conversion of nitrile to amide on polymers of intrinsic microporosity (PIM-1). 2016 , 98, 244-251	29
934	Unsteady state cyclic pressure-vacuum swing permeation for low pressure niche gas separation applications. 2016 , 109, 505-512	3
933	Temporal evolution of the selectivity-permeability relationship during porous membrane filtration of protein solutions. <i>Journal of Membrane Science</i> , 2016 , 514, 385-397	9.6 8
932	Citric acid grafting onto polyurethane for the control of molecular interactions and water compatibility. 2016 , 48, 691-710	
931	Dynamics of effusive and diffusive gas separation on pillared graphene. 2016 , 18, 17018-23	12
930	A novel zeolitic imidazolate framework based mixed-matrix membrane for efficient CO ₂ separation under wet conditions. 2016 , 65, 427-436	19
929	Gas separation membranes prepared with copolymers of perfluoro(2-methylene-4,5-dimethyl-1,3-dioxolane) and chlorotrifluoroethylene. 2016 , 188, 18-22	19
928	Bifunctionalized Intrinsically Microporous Polyimides with Simultaneously Enhanced Gas Permeability and Selectivity. 2016 , 37, 900-4	23
927	Computational Methods for MOF/Polymer Membranes. 2016 , 16, 703-18	13
926	Ultrasensitive Gas Separation by Nanoporous Metal-Organic Frameworks Embedded in Gas-Barrier Nanocellulose Films. 2016 , 28, 1765-9	95
925	Interfacial Design of Mixed Matrix Membranes for Improved Gas Separation Performance. 2016 , 28, 3399-405	243
924	Size effects of graphene oxide on mixed matrix membranes for CO ₂ separation. 2016 , 62, 2843-2852	88
923	The morphology and gas-separation performance of membranes comprising multiwalled carbon nanotubes/polysulfone. 2016 , 133,	26
922	Gas permeation properties of polymer membranes containing pendant tertiary amine groups. 2016 , 28, 1005-1014	8
921	Separation of gas mixtures by new type of membranes (Dynamic liquid membranes). 2016 , 160, 132-135	11
920	Toward the Development and Deployment of Large-Scale Carbon Dioxide Capture and Conversion Processes. 2016 , 55, 3383-3419	145
919	PEG-imidazolium-functionalized 6FDA-urene polyimide as a novel polymeric membrane for enhanced CO ₂ separation. 2016 , 6, 31083-31091	28
918	Challenges and recent advances in MOF-polymer composite membranes for gas separation. 2016 , 3, 896-909	205

917	Amine-functionalized metal-organic frameworks: structure, synthesis and applications. 2016 , 6, 32598-32614	117
916	Polyaniline/polybenzimidazole blends: Characterisation of its physico-chemical properties and gas separation behaviour. 2016 , 77, 98-113	22
915	Mixed Matrix Membranes (MMMs) Comprising Exfoliated 2D Covalent Organic Frameworks (COFs) for Efficient CO ₂ Separation. 2016 , 28, 1277-1285	404
914	Improvement of H ₂ /CH ₄ Separation Performance of PES Hollow Fiber Membranes by Addition of MWCNTs into Polymeric Matrix. 2016 , 55, 1155-1166	11
913	Effect of UV irradiation and physical aging on O ₂ and N ₂ transport properties of thin glassy poly(arylene ether ketone) copolymer films based on tetramethyl bisphenol A and 4,4'-difluorobenzophenone. 2016 , 87, 202-214	12
912	Pseudopolymorphic seeding for the rational synthesis of hybrid membranes with a zeolitic imidazolate framework for enhanced molecular separation performance. 2016 , 4, 4172-4179	30
911	Mixed Matrix Membranes Containing UiO-66(Hf)-(OH) ₂ Metal-Organic Framework Nanoparticles for Efficient H ₂ /CO ₂ Separation. 2016 , 55, 7933-7940	31
910	A molecular characterization of hyper-cross-linked hybrid polyPOSS-imide networks. 2016 , 117, 338-353	9
909	Characterization and Effect of Covalently Grafted Benzoic Acid on the Low Temperature Flexibility and Water Vapor Permeability of a Polyurethane Copolymer. 2016 , 55, 356-367	5
908	Ionic liquid-based materials: a platform to design engineered CO ₂ separation membranes. 2016 , 45, 2785-824	271
907	Highly CO ₂ -Selective Gas Separation Membranes Based on Segmented Copolymers of Poly(Ethylene oxide) Reinforced with Pentiptycene-Containing Polyimide Hard Segments. 2016 , 8, 2306-17	90
906	Ethylene/ethane permeation, diffusion and gas sorption properties of carbon molecular sieve membranes derived from the prototype ladder polymer of intrinsic microporosity (PIM-1). <i>Journal of Membrane Science</i> , 2016 , 504, 133-140	9.6 76
905	High-performance SPEEK/amino acid salt membranes for CO ₂ separation. 2016 , 6, 2252-2258	18
904	Effect of flow configuration on Darcian and Forchheimer permeabilities determination in a porous composite tube. 2016 , 41, 316-323	13
903	PDMS mixed matrix membranes containing hollow silicalite sphere for ethanol / water separation by pervaporation. <i>Journal of Membrane Science</i> , 2016 , 502, 48-56	9.6 53
902	Matrimid mixed matrix membranes for enhanced CO ₂ /CH ₄ separation. 2016 , 36, 499-511	11
901	Polymer membranes for acid gas removal from natural gas. 2016 , 158, 333-356	145
900	Nanofiller-tuned microporous polymer molecular sieves for energy and environmental processes. 2016 , 4, 270-279	57

899	Propylene/propane plasticization in polyimide membranes. <i>Journal of Membrane Science</i> , 2016 , 501, 179-190	9.6	10
898	High-performance carbon molecular sieve membranes for ethylene/ethane separation derived from an intrinsically microporous polyimide. <i>Journal of Membrane Science</i> , 2016 , 500, 115-123	9.6	71
897	Polybenzimidazole based polymeric ionic liquids possessing partial ionic character: Effects of anion exchange on their gas permeation properties. <i>Journal of Membrane Science</i> , 2016 , 497, 282-288	9.6	12
896	An evaluation of membrane properties and process characteristics of a scaled-up pressure retarded osmosis (PRO) process. 2016 , 378, 1-13		17
895	Combination of ionic liquids with membrane technology: A new approach for CO ₂ separation. <i>Journal of Membrane Science</i> , 2016 , 497, 1-20	9.6	353
894	Amine-containing polymer/zeolite Y composite membranes for CO ₂ /N ₂ separation. <i>Journal of Membrane Science</i> , 2016 , 497, 21-28	9.6	74
893	Liberation of small molecules in polyimide membrane formation: An effect on gas separation properties. <i>Journal of Membrane Science</i> , 2016 , 499, 20-27	9.6	18
892	Polysulfone/poly(ether sulfone) blended membranes for CO ₂ separation. 2016 , 133, n/a-n/a		40
891	Optimization of membrane based nitrogen removal from natural gas. <i>Journal of Membrane Science</i> , 2016 , 498, 291-301	9.6	48
890	Helix-Sense-Selective Polymerization of Achiral Phenylacetylenes and Unique Properties of the Resulting Cis-cisoidal Polymers. 2017 , 57, 89-118		39
889	Mixed matrix membranes of Pebax1657 loaded with iron benzene-1,3,5-tricarboxylate for gas separation. 2017 , 38, 1363-1370		9
888	Modeling of Si-Containing Polymers. 2017 , 307-333		
887	50th Anniversary Perspective: Are Polymer Nanocomposites Practical for Applications?. 2017 , 50, 714-731		375
886	Novel co-polyimides containing pBAPS (bis [4-(4-aminophenoxy) phenyl] sulfone) for CO ₂ separation. 2017 , 178, 90-104		6
885	Decarboxylation crosslinking of polyimides with high CO ₂ /CH ₄ separation performance and plasticization resistance. <i>Journal of Membrane Science</i> , 2017 , 528, 206-216	9.6	68
884	Fabrication of polyimide and functionalized multi-walled carbon nanotubes mixed matrix membranes by in-situ polymerization for CO ₂ separation. 2017 , 177, 327-336		56
883	Carbon molecular sieve structure development and membrane performance relationships. 2017 , 115, 237-248		119
882	Potential applications of membrane separation for subsea natural gas processing: A review. 2017 , 39, 101-117		66

881	Oxygen Permselectivities of Novel Multi-bridged Copolymers Synthesized by Imine Metathesis between N-Imines and C-Imines in the Pendant Groups of Two Poly(substituted acetylene)s. 2017 , 46, 401-404		2
880	Effects of the side groups of the spirobichroman-based diamines on the chain packing and gas separation properties of the polyimides. <i>Journal of Membrane Science</i> , 2017 , 530, 176-184	9.6	44
879	Impact of tuning CO ₂ -philicity in polydimethylsiloxane-based membranes for carbon dioxide separation. <i>Journal of Membrane Science</i> , 2017 , 530, 213-219	9.6	21
878	High-flux polysulfone mixed matrix hollow fiber membrane incorporating mesoporous titania nanotubes for gas separation. 2017 , 180, 13-22		22
877	Tailoring of water swollen PVA membrane for hosting carriers in CO ₂ facilitated transport membranes. 2017 , 179, 550-560		26
876	Molecular simulation and Monte Carlo study of structural-transport-properties of PEBA-MFI zeolite mixed matrix membranes for CO ₂ , CH ₄ and N ₂ separation. 2017 , 103, 12-22		19
875	Stepwise observation and quantification and mixed matrix membrane separation of CO within a hydroxy-decorated porous host. 2017 , 8, 3239-3248		13
874	Structure Manipulation in Triptycene-Based Polyimides through Main Chain Geometry Variation and Its Effect on Gas Transport Properties. 2017 , 56, 1868-1879		25
873	Pushing CO ₂ -philic membrane performance to the limit by designing semi-interpenetrating networks (SIPN) for sustainable CO ₂ separations. 2017 , 10, 1339-1344		140
872	Molecular mobility and gas transport properties of nanocomposites based on PIM-1 and polyhedral oligomeric phenethyl-silsesquioxanes (POSS). <i>Journal of Membrane Science</i> , 2017 , 529, 274-285	9.6	20
871	In situ confinement of free linkers within a stable MOF membrane for highly improved gas separation properties. 2017 , 19, 1601-1606		18
870	PEG-imidazolium-incorporated polyimides as high-performance CO ₂ -selective polymer membranes: The effects of PEG-imidazolium content. 2017 , 179, 283-290		21
869	Poly(2,6-dimethyl-1,4-phenylene oxide) blends with a poly(arylene ether ketone) for gas separation membranes. 2017 , 114, 135-143		12
868	Polymeric membrane materials selection for high-pressure CO ₂ removal from natural gas. 2017 , 24, 1		15
867	CO Capture and Separations Using MOFs: Computational and Experimental Studies. 2017 , 117, 9674-9754		636
866	The Use of Iptycenes in Rational Macromolecular Design for Gas Separation Membrane Applications. 2017 , 56, 4220-4236		54
865	Polymers of intrinsic microporosity/metal-organic framework hybrid membranes with improved interfacial interaction for high-performance CO ₂ separation. 2017 , 5, 10968-10977		79
864	Membranes with a low loading of Metal-Organic Framework-Supported Ionic Liquids for CO ₂ /N ₂ separation in CO ₂ capture. 2017 , 5, 2158-2162		19

863	Gas separation mechanism of CO ₂ selective amidoxime-poly(1-trimethylsilyl-1-propyne) membranes. 2017 , 8, 3341-3350		18
862	Synthesis, characterization, and gas transport properties of new semifluorinated poly(ether imide)s containing cardo moiety. 2017 , 134, 45213		6
861	Triptycene-based copolyimides with tailored backbone rigidity for enhanced gas transport. 2017 , 126, 314-323		18
860	Thermally treated polyaniline/polybenzimidazole blend membranes: Structural changes and gas transport properties. <i>Journal of Membrane Science</i> , 2017 , 537, 315-322	9.6	20
859	Recent progress on submicron gas-selective polymeric membranes. 2017 , 5, 8860-8886		49
858	Description of the gas transport through dynamic liquid membrane. 2017 , 184, 152-157		3
857	Synthesis of a PEBA-1074/ZnO nanocomposite membrane with improved CO ₂ separation performance. 2017 , 26, 454-465		53
856	Improved gas selectivity of polyetherimide membrane by the incorporation of PIM polyimide phase. 2017 , 134,		19
855	Preparation of CO ₂ selective composite membranes using Pebax/CuBTC/PEG-ran-PPG ternary system. 2017 , 26, 530-539		15
854	Maximizing the right stuff: The trade-off between membrane permeability and selectivity. 2017 , 356,		1187
853	Molecular dynamics simulation and Monte Carlo study of transport and structural properties of PEBA 1657 and 2533 membranes modified by functionalized POSS-PEG material. 2017 , 241, 646-653		11
852	Synthesis, characterization, and performance evaluation of PES/EDA-functionalized TiO ₂ mixed matrix membranes for CO ₂ /CH ₄ separation. 2017 , 134, 45346		18
851	Mixed Matrix Membranes with Excellent CO ₂ Capture Induced by Nano-Carbon Hybrids. 2017 , 3, 560-568		8
850	Temperature-dependent gas transport and its correlation with kinetic diameter in polymer nanocomposite membrane. 2017 , 40, 537-543		9
849	Amino-Functionalized ZIF-7 Nanocrystals: Improved Intrinsic Separation Ability and Interfacial Compatibility in Mixed-Matrix Membranes for CO /CH Separation. 2017 , 29, 1606999		160
848	Investigating the HO/O selective permeability from a view of multi-scale structure of starch/SiO ₂ nanocomposites. 2017 , 173, 143-149		12
847	Palladium nanoparticle binding in functionalized track etched PET membrane for hydrogen gas separation. 2017 , 42, 16186-16194		14
846	Ultrathin mixed matrix membranes containing two-dimensional metal-organic framework nanosheets for efficient CO ₂ /CH ₄ separation. <i>Journal of Membrane Science</i> , 2017 , 539, 213-223	9.6	116

845	Vapor-phase synthesis of poly(p -xylylene) membranes for gas separations. <i>Journal of Membrane Science</i> , 2017 , 539, 101-107	9.6	6
844	Sorption and diffusion of moisture in silica-polyacrylamide nanocomposite films. 2017 , 122, 359-371		3
843	Synthesis, characterization, and CO ₂ separation performance of polyether sulfone/[EMIM][Tf ₂ N] ionic liquid-polymeric membranes (ILPMs). 2017 , 54, 98-106		37
842	A multiscale approach to predict the mixed gas separation performance of glassy polymeric membranes for CO ₂ capture: the case of CO ₂ /CH ₄ mixture in Matrimid [®] . <i>Journal of Membrane Science</i> , 2017 , 539, 88-100	9.6	22
841	Ionic Liquid/Metal-Organic Framework Composites: From Synthesis to Applications. 2017 , 10, 2842-2863		138
840	Nanostructured Materials for Next-Generation Energy Storage and Conversion. 2017 ,		4
839	Molecular transport through mixed matrix membranes: A time-dependent density functional approach. 2017 , 63, 4586-4594		8
838	Synthesis and gas permeation properties of a novel thermally-rearranged polybenzoxazole made from an intrinsically microporous hydroxyl-functionalized triptycene-based polyimide precursor. 2017 , 121, 9-16		41
837	Enhancing Mixed-Matrix Membrane Performance with Metal-Organic Framework Additives. 2017 , 17, 4467-4488		92
836	Enhancement of synthesis gas and methanol production by flare gas recovery utilizing a membrane based separation process. 2017 , 166, 186-201		35
835	High-performance nanocomposite membranes realized by efficient molecular sieving with CuBDC nanosheets. 2017 , 53, 4254-4257		82
834	Ionic Polyimides: Hybrid Polymer Architectures and Composites with Ionic Liquids for Advanced Gas Separation Membranes. 2017 , 56, 5055-5069		70
833	Amine-functionalized CuBTC/poly(ether-b-amide-6) (Pebax [®] MH 1657) mixed matrix membranes for CO ₂ /CH ₄ separation. 2017 , 95, 2024-2033		41
832	Performance evaluation of a synthesized and characterized Pebax1657/PEG1000/Al ₂ O ₃ membrane for CO ₂ /CH ₄ separation using response surface methodology. 2017 , 24, 1		20
831	Synthesis and properties of sulfonated biphenyl poly(ether sulfone) and its mixed-matrix membranes containing carbon nanotubes for gas separation. 2017 , 134, 44995		8
830	Biobased Polycarbonate as a Gas Separation Membrane and Breathing Glass[For Energy Saving Applications. 2017 , 2, 1700026		34
829	Mechanical behavior of MWCNTs based mixed-matrix polymeric and carbon hollow fiber membranes. 2017 , 183, 21-31		10
828	Structure-controlled mesoporous SBA-15-derived mixed matrix membranes for H ₂ purification and CO ₂ capture. 2017 , 42, 11379-11391		17

827	Perspectives on water-facilitated CO ₂ capture materials. 2017 , 5, 6794-6816		47
826	Polyurethanes containing Poly(arylene ether sulfone) and Poly(ethylene oxide) segments for gas separation membranes. 2017 , 118, 256-267		16
825	Gas separation with mixed matrix membranes obtained from MOF UiO-66-graphite oxide hybrids. <i>Journal of Membrane Science</i> , 2017 , 526, 205-211	9.6	115
824	Mixed Matrix Membranes Based on PIMs for Gas Permeation: Principles, Synthesis, and Current Status. 2017 , 204, 295-309		46
823	Effective enhancement of gas separation performance in mixed matrix membranes using core/shell structured multi-walled carbon nanotube/graphene oxide nanoribbons. 2017 , 28, 065702		31
822	Supported protic-ionic-liquid membranes with facilitated transport mechanism for the selective separation of CO ₂ . <i>Journal of Membrane Science</i> , 2017 , 527, 60-67	9.6	43
821	Membranes for helium recovery: An overview on the context, materials and future directions. 2017 , 176, 335-383		49
820	Novel functional aromatic polyimides and polyimide/titania nanocomposite thin films for gas separation: preparation and structural characterization. 2017 , 14, 777-789		16
819	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	9.6	72
818	Enhanced permeation performance of polyether-polyamide block copolymer membranes through incorporating ZIF-8 nanocrystals. 2017 , 25, 882-891		25
817	A review of the latest development of polyimide based membranes for CO ₂ separations. 2017 , 120, 104-130		78
816	Highly Carboxylate-Functionalized Polymers of Intrinsic Microporosity for CO ₂ -Selective Polymer Membranes. 2017 , 50, 8019-8027		45
815	50th Anniversary Perspective: Polymers and Mixed Matrix Membranes for Gas and Vapor Separation: A Review and Prospective Opportunities. 2017 , 50, 7809-7843		481
814	Synthesis and gas transport properties of poly(pentafluorostyrene). 2017 , 57, 923-928		13
813	Molecular Design of Triphenyl Base-Based Polymers Containing Spirobichroman Structure for Gas Separation. 2017 , 56, 12783-12788		12
812	Two-dimensional porous polyphthalocyanine (PPC) as an efficient gas-separation membrane for ammonia synthesis. 2017 , 17, 1765-1770		4
811	Biogas as a renewable energy fuel A review of biogas upgrading, utilisation and storage. 2017 , 150, 277-294		352
810	Selective separation of H ₂ S and CO ₂ from CH ₄ by supported ionic liquid membranes. <i>Journal of Membrane Science</i> , 2017 , 543, 282-287	9.6	50

809	Influence of Functionalized Nanoparticles on the CO ₂ /N ₂ Separation Properties of PVA-based Gas Separation Membranes. 2017 , 114, 627-635		16
808	Integrin binding: Sticking around vessels. 2017 , 16, 881-883		1
807	Polymer-Grafted Nanoparticle Membranes with Controllable Free Volume. 2017 , 50, 7111-7120		64
806	Subnanoporous Highly Oxygen Permselective Membranes from Poly(conjugated hyperbranched macromonomer)s Synthesized by One-Pot Simultaneous Two-Mode Homopolymerization of 1,3-Bis(silyl)phenylacetylene Using a Single Rh Catalytic System: Control of Their Structures and Permselectivities. 2017 , 50, 7121-7136		5
805	Promoting permeability-selectivity anti-trade-off behavior in polyvinyl alcohol (PVA) nanocomposite membranes. <i>Journal of Membrane Science</i> , 2017 , 544, 287-296	9.6	21
804	Adsorption and Diffusion of Fluids in Defective Carbon Nanotubes: Insights from Molecular Simulations. 2017 , 33, 11834-11844		5
803	A Review of Post-combustion CO ₂ Capture Technologies from Coal-fired Power Plants. 2017 , 114, 650-665		228
802	Towards the generalization of membrane structure-property relationship of polyimides and copolyimides: A group contribution study. <i>Journal of Membrane Science</i> , 2017 , 543, 233-254	9.6	5
801	Molecular dynamics simulation study of parallel orientation structure and gas transport in graphite-nanoplatelet/polyethylene composites. 2017 , 13, 57-64		4
800	PEO-rich semi-interpenetrating polymer network (s-IPN) membranes for CO ₂ separation. <i>Journal of Membrane Science</i> , 2017 , 544, 143-150	9.6	25
799	Synthesis, properties and gas separation performance of poly(arylene ether sulfone) containing imide pendant groups. 2017 , 7, 42468-42475		10
798	Recent progress of fillers in mixed matrix membranes for CO ₂ separation: A review. 2017 , 188, 431-450		224
797	Post combustion CO ₂ capture using zeolite membrane. 2017 ,		12
796	Surface engineering of polymer membrane for air separation. 2017 ,		7
795	The chemistry of metal-organic frameworks for CO ₂ capture, regeneration and conversion. 2017 , 2,		776
794	A systematic optimization of Internally Staged Design (ISD) for a full-scale reverse osmosis process. <i>Journal of Membrane Science</i> , 2017 , 540, 285-296	9.6	21
793	Hydrogen gas separation with controlled selectivity via efficient and cost effective block copolymer coated PET membranes. 2017 , 42, 19977-19983		10
792	Molecular dynamics and Monte Carlo simulation of the structural properties, diffusion and adsorption of poly (amide-6-b-ethylene oxide)/Faujasite mixed matrix membranes. 2017 , 242, 404-415		11

791	Microporous polymers: Ultrapermeable membranes. 2017 , 16, 880-881		27
790	Molecular Simulations of Solute Transport in Polymer Melts. 2017 , 6, 864-868		15
789	Effect of pore penetration on transport through supported membranes studied by electron microscopy and pervaporation. <i>Journal of Membrane Science</i> , 2017 , 542, 18-23	9.6	3
788	Operational Criteria for the Separation of Alkanes by Zeolite Membranes. 2017 , 89, 926-934		4
787	Experimental analysis of membrane and pressure swing adsorption (PSA) for the hydrogen separation from natural gas. 2017 , 167, 896-907		40
786	Sorption, diffusion, and permeability of humid gases and aging of thermally rearranged (TR) polymer membranes from a novel ortho-hydroxypolyimide. <i>Journal of Membrane Science</i> , 2017 , 542, 439-455	9.6	13
785	Highly selective gas separation membrane using in situ amorphised metal-organic frameworks. 2017 , 10, 2342-2351		100
784	Two-Dimensional Materials as Prospective Scaffolds for Mixed-Matrix Membrane-Based CO Separation. 2017 , 10, 3304-3316		57
783	A QM/MM study to investigate selectivity of nanoporous graphene membrane for arsenate and chromate removal from water. 2017 , 685, 371-376		4
782	Effects of low and high molecular mass PEG incorporation into different types of poly(ether-b-amide) copolymers on the permeation properties of CO ₂ and CH ₄ . 2017 , 24, 1		23
781	Improved CO ₂ /CH ₄ separation using a nanocomposite ionic liquid gel membrane. 2017 , 46, 275-288		31
780	Evaluation of Gas Transport Properties of Highly Rigid Aromatic PI DPPD-IMM/PBI Blends. 2017 , 56, 9355-93668		
779	Polyimide-SiO ₂ -TiO ₂ nanocomposite structural study probing free volume, physical properties, and gas transport. <i>Journal of Membrane Science</i> , 2017 , 542, 110-122	9.6	17
778	Highly selective multilayer polymer thin films for CO ₂ /N ₂ separation. 2017 , 55, 1730-1737		13
777	Ultrathin graphene oxide-based hollow fiber membranes with brush-like CO-philic agent for highly efficient CO capture. 2017 , 8, 2107		113
776	Aromatic poly(ether ether ketone)s capable of crosslinking via UV irradiation to improve gas separation performance. 2017 , 7, 55371-55381		4
775	Gas-transport properties of epoxidated metathesis polynorbornenes. 2017 , 59, 560-569		18
774	Revisiting the Aluminum Trimesate-Based MOF (MIL-96): From Structure Determination to the Processing of Mixed Matrix Membranes for CO ₂ Capture. 2017 , 29, 10326-10338		53

773	Mechanism and Prediction of Gas Permeation through Sub-Nanometer Graphene Pores: Comparison of Theory and Simulation. 2017 , 11, 7974-7987		78
772	Synthesis and characterization of poly(ether-block-amide) copolymers/multi-walled carbon nanotube nanocomposite membranes for CO ₂ /CH ₄ separation. 2017 , 34, 2459-2470		32
771	Mixed-Matrix Membranes of the Air-Stable MOF-5 Analogue [Co ₄ (μ -O)(Me ₂ pzba) ₃] with a Mixed-Functional Pyrazolate-Carboxylate Linker for CO ₂ /CH ₄ Separation. 2017 , 17, 4090-4099		16
770	Fabrication and performance characterization of novel zinc oxide filled cross-linked PVA/PEG 600 blended membranes for CO ₂ /N ₂ separation. 2017 , 55, 65-73		34
769	Embedding Molecular Amine Functionalized Polydopamine Submicroparticles into Polymeric Membrane for Carbon Capture. 2017 , 56, 8103-8110		12
768	Mixed-matrix membranes incorporated with porous shape-persistent organic cages for gas separation. 2017 , 490, 29-36		27
767	Advances in polymer-inorganic hybrids as membrane materials. 2017 , 163-206		12
766	Novel carbon-based separation membranes composed of integrated zero- and one-dimensional nanomaterials. 2020 , 8, 1084-1090		10
765	Non-humidified fuel cells using a deep eutectic solvent (DES) as the electrolyte within a polymer electrolyte membrane (PEM): the effect of water and counterions. 2020 , 22, 2917-2929		19
764	Modeling of Gas Transport through Polymer/MOF Interfaces: A Microsecond-Scale Concentration Gradient-Driven Molecular Dynamics Study. 2020 , 32, 1288-1296		29
763	Microporous Polysulfones with Enhanced Separation Performance via Integration of the Triptycene Moiety. 2020 , 59, 5351-5361		7
762	CO ₂ Capture and Separation of Metal-Organic Frameworks. 2020 , 5-27		8
761	Polymeric Membranes. 2020 , 187-214		
760	Sub-100 nm carbon molecular sieve membranes from a polymer of intrinsic microporosity precursor: Physical aging and near-equilibrium gas separation properties. <i>Journal of Membrane Science</i> , 2020 , 597, 117752	9.6	20
759	Process-integrated design of a sub-ambient membrane process for CO ₂ removal from natural gas power plants. 2020 , 260, 114255		18
758	Possibilities for the biologically-assisted utilization of CO ₂ -rich gaseous waste streams generated during membrane technological separation of biohydrogen. 2020 , 36, 231-243		14
757	Processing gas from tight formations. 2020 , 451-518		
756	Enhanced CO ₂ /CH ₄ Separation Performances of Mixed Matrix Membranes Incorporated with Two-Dimensional Ni-Based MOF Nanosheets. 2020 , 8, 642-648		17

755	Correlating Gas Permeability and Young's Modulus during the Physical Aging of Polymers of Intrinsic Microporosity Using Atomic Force Microscopy. 2020 , 59, 5381-5391		15
754	Synthesis of nano-sheets seeds for secondary growth of highly hydrogen permselective ZIF-95 membranes. <i>Journal of Membrane Science</i> , 2020 , 597, 117629	9.6	22
753	Recent developments on polymeric membranes for CO ₂ capture from flue gas. 2020 , 40, 529-542		7
752	P84/ZCC Hollow Fiber Mixed Matrix Membrane with PDMS Coating to Enhance Air Separation Performance. 2020 , 10,		7
751	Predicting the performance of polyvinylidene fluoride, polyethersulfone and polysulfone filtration membranes using machine learning. 2020 , 8, 21862-21871		4
750	A Review of Technical Advances, Barriers, and Solutions in the Power to Hydrogen (P2H) Roadmap. 2020 , 6, 1364-1380		23
749	Gas Transport in a Polymer of Intrinsic Microporosity (PIM-1) Substituted with Pseudo-Ionic Liquid Tetrazole-Type Structures. 2020 , 53, 8951-8959		9
748	Separation using self-assembled materials. 2020 , 45, 823-831		1
747	Enhancing the Gas Separation Selectivity of Mixed-Matrix Membranes Using a Dual-Interfacial Engineering Approach. 2020 , 142, 18503-18512		29
746	Membrane-Assisted Removal of Hydrogen and Nitrogen from Synthetic Natural Gas for Energy-Efficient Liquefaction. 2020 , 13, 5023		9
745	Nanosizing zeolite 5A fillers in mixed-matrix carbon molecular sieve membranes to improve gas separation performance. 2020 , 2, 100016		10
744	How is mixed-gas permeation through poly(1-trimethylsilyl-1-propyne) membranes influenced by elevated temperatures?. <i>Journal of Membrane Science</i> , 2020 , 615, 118430	9.6	3
743	Synthesis of thin SAPO-34 zeolite membranes in concentrated gel. <i>Journal of Membrane Science</i> , 2020 , 612, 118451	9.6	14
742	New Poly(imide)s Bearing Alkyl Side-Chains: A Study on the Impact of Size and Shape of Lateral Groups on Thermal, Mechanical, and Gas Transport Properties. 2020 , 10,		0
741	Facile and Time-Efficient Carboxylic Acid Functionalization of PIM-1: Effect on Molecular Packing and Gas Separation Performance. 2020 , 53, 6220-6234		13
740	Can PDMS membranes separate aldehydes and alkenes at high temperatures?. <i>Journal of Membrane Science</i> , 2020 , 615, 118334	9.6	6
739	Investigations on 6FDA/BPDA-DAM polymer melt properties and CO ₂ adsorption using molecular dynamics simulations. <i>Journal of Membrane Science</i> , 2020 , 613, 118377	9.6	5
738	Thermally rearranged polybenzoxazole copolymers incorporating Tröger's base for high flux gas separation membranes. <i>Journal of Membrane Science</i> , 2020 , 612, 118437	9.6	20

737	Readily Constructed Glass Piston Pump for Gas Recirculation. 2020 , 5, 16455-16459		3
736	-Aryl-linked spirocyclic polymers for membrane separations of complex hydrocarbon mixtures. 2020 , 369, 310-315		67
735	Perfluoropolymers for gas separation membrane applications. 2020 , 143-155		1
734	Gas transport in fluorine-containing polymers. 2020 , 157-203		
733	Understanding CO/CH Separation in Pristine and Defective 2D MOF CuBDC Nanosheets via Nonequilibrium Molecular Dynamics. 2020 , 36, 13591-13600		12
732	Optical Analysis of the Internal Void Structure in Polymer Membranes for Gas Separation. 2020 , 10,		1
731	Tuning Selectivities in Gas Separation Membranes Based on Polymer-Grafted Nanoparticles. 2020 ,		24
730	Rational design of poly(ethylene oxide) based membranes for sustainable CO ₂ capture. 2020 , 8, 24233-24252	39	
729	Graphene-based Membranes for H ₂ Separation: Recent Progress and Future Perspective. 2020 , 10,		10
728	Synthesis and characterization of imidazolium-mediated Tröger's base containing poly(amide)-ionenes and composites with ionic liquids for CO ₂ separation membranes. 2020 , 11, 7370-7381		1
727	Boosting gas separation performance and suppressing the physical aging of polymers of intrinsic microporosity (PIM-1) by nanomaterial blending. 2020 , 12, 23333-23370		37
726	Polymeric membranes: chemistry, physics, and applications. 2020 , 58, 2433-2434		5
725	Cellulose-Based Carbon Molecular Sieve Membranes for Gas Separation: A Review. 2020 , 25,		12
724	Highly permeable polyimides incorporating Tröger's base (TB) units for gas separation membranes. <i>Journal of Membrane Science</i> , 2020 , 615, 118533	9.6	10
723	Membranes for air and volatile organic compounds treatment. 2020 , 47-69		2
722	MOF mixed matrix membranes for CO ₂ separation. 2020 , 331-355		3
721	Fast synthesis of thin all-silica DDR zeolite membranes with inorganic base as mineralizing agent for CO ₂ -CH ₄ separation. 2020 , 253, 117505		16
720	Facile Covalent Crosslinking of Zeolitic Imidazolate Framework/Polydimethylsiloxane Mixed Matrix Membrane for Enhanced Ethanol/Water Separation Performance. 2020 , 8, 12664-12676		24

719	Synthesis and Permselectivity of a Soluble Two-Dimensional Macromolecular Sheet by Solid-Solid Interfacial Polycondensation Followed by Chemical Exfoliation. 2020 , 2, 1121-1128	1
718	Magnetically Aligned and Enriched Pathways of Zeolitic Imidazolate Framework 8 in Matrimid Mixed Matrix Membranes for Enhanced CO Permeability. 2020 , 10,	6
717	The assessment of honeycomb structure UiO-66 and amino functionalized UiO-66 metal-organic frameworks to modify the morphology and performance of Pebax [®] 1657-based gas separation membranes for CO capture applications. 2020 , 27, 40618-40632	9
716	CO/N Separation Properties of Polyimide-Based Mixed-Matrix Membranes Comprising UiO-66 with Various Functionalities. 2020 , 10,	16
715	Comparative thermodynamic analysis of membrane-based vacuum air dehumidification systems. 2020 , 179, 115676	8
714	Isomer-Tailored Carbon Molecular Sieve Membranes with High Gas Separation Performance. 2020 , 13, 5318-5328	6
713	Can Self-Assembly Address the Permeability/Selectivity Trade-Offs in Polymer Membranes?. 2020 , 53, 5649-5654	22
712	Influence of interfacial layer parameters on gas transport properties through modeling approach in MWCNTs based mixed matrix composite membranes. 2020 , 218, 115543	14
711	Energy and time efficient infrared (IR) irradiation treatment for preparing thermally rearranged (TR) and carbon molecular sieve (CMS) membranes for gas separation. <i>Journal of Membrane Science</i> , 2020 , 613, 118477	9.6 8
710	Revealing the Surface Effect on Gas Transport and Mechanical Properties in Nonporous Polymeric Membranes in Terms of Surface Free Energy. 2020 , 36, 12911-12921	5
709	Dual Anion-Cation Crosslinked Poly(ionic liquid) Composite Membranes for Enhanced CO ₂ Separation. 2020 , 2, 5067-5076	7
708	Characterization and gas transport properties of UV-irradiated polydimethylsiloxane (PDMS)-containing polyimide copolymer membranes. 2020 , 210, 122966	3
707	Novel poly(ether sulfone) with tetraphenyl bipyrimidine unit for gas separation. 2020 , 211, 123092	
706	Hydrocarbon Molecules Separation using Nanoporous Materials. 2020 , 217-264	
705	Novel smart, super-hydrophobic, and next generation membranes for thermal induced membrane separation processes. 2020 , 187-202	
704	Composite amine mixed matrix membranes for high-pressure CO-CH separation: synthesis, characterization and performance evaluation. 2020 , 7, 200795	5
703	Controlled Superacid-Catalyzed Self-Cross-Linked Polymer of Intrinsic Microporosity for High-Performance CO ₂ Separation. 2020 , 53, 7988-7996	7
702	Ultrafast Semi-Solid Processing of Highly Durable ZIF-8 Membranes for Propylene/Propane Separation. 2020 , 132, 22093-22098	2

701	Ultrafast Semi-Solid Processing of Highly Durable ZIF-8 Membranes for Propylene/Propane Separation. 2020 , 59, 21909-21914	26
700	The Synthesis and Gas Transport Properties of PIM-1 Polybenzodioxane Modified with Benzanilide. 2020 , 2, 203-209	0
699	Surface modification of ZIF-90 with triptycene for enhanced interfacial interaction in mixed-matrix membranes for gas separation. 2020 , 58, 2675-2687	7
698	6FDA-containing polyimide-ionene + ionic liquid gas separation membranes. 2020 , 58, 2664-2674	1
697	A new approach to separate hydrogen from carbon dioxide using graphdiyne-like membrane. 2020 , 10, 13549	5
696	Mitigation of Physical Aging with Mixed Matrix Membranes Based on Cross-Linked PIM-1 Fillers and PIM-1. 2020 , 12, 46756-46766	15
695	Tuning the selective permeability of polydisperse polymer networks. 2020 , 16, 8144-8154	12
694	Facilitated Transport Membranes With Ionic Liquids for CO Separations. 2020 , 8, 637	13
693	Cross-Linked Mixed-Matrix Membranes Using Functionalized UiO-66-NH into PEG/PPG-PDMS-Based Rubbery Polymer for Efficient CO Separation. 2020 , 12, 57916-57931	19
692	Controlling the Relative Fluxes of Protons and Oxygen to Electrocatalytic Buried Interfaces with Tunable Silicon Oxide Overlayers. 2020 , 3, 12338-12350	5
691	Perfluorodioxolane Polymers for Gas Separation Membrane Applications. 2020 , 10,	7
690	Selective CO ₂ capture through microporous Tb(BTC)(H ₂ O).(DMF) _{1.1} MOF as an additive in novel MMMs fabricated from Matrimid [®] 5218. 2020 , 13, 8979-8994	5
689	Study on the effect of ZIF-8 nanoparticles on the transport behavior of CH ₄ and CO ₂ gases in polysulfone membrane. 2020 , 839, 012001	
688	Gas Permeation Properties of Multiwalled Carbon Nanotubes on Polyether Block Amide (Pebax-1657)/Polyethersulfone(PES) Blend Mixed Matrix Membrane for CO ₂ /CH ₄ Separation. 2020 , 307, 258-263	
687	A state of the art review on biomass processing and conversion technologies to produce hydrogen and its recovery via membrane separation. 2020 , 45, 15166-15195	57
686	Molecularly Engineered 6FDA-Based Polyimide Membranes for Sour Natural Gas Separation. 2020 , 59, 14877-14883	22
685	A review of the application of carbon-based membranes to hydrogen separation. 2020 , 55, 11052-11070	8
684	Selective Separation of CO ₂ from Flue Gas Using Carbon and Boron Nitride Nanotubes as a Membrane. 2020 , 34, 7223-7231	5

683	Metal-organic framework MOF-801/PIM-1 mixed-matrix membranes for enhanced CO ₂ /N ₂ separation performance. 2020 , 250, 117198	28
682	Molecularly Engineered 6FDA-Based Polyimide Membranes for Sour Natural Gas Separation. 2020 , 132, 14987-14993	3
681	Optimization analysis of polyurethane based mixed matrix gas separation membranes by incorporation of gamma-cyclodextrin metal organic frame work. 2020 , 74, 3527-3543	8
680	Highly permeable novel PDMS coated asymmetric polyethersulfone membranes loaded with SAPO-34 zeolite for carbon dioxide separation. 2020 , 248, 116899	17
679	Designing exceptional gas-separation polymer membranes using machine learning. 2020 , 6, eaaz4301	43
678	PEG/PPG-PDMS-Based Cross-Linked Copolymer Membranes Prepared by ROMP and In Situ Membrane Casting for CO Separation: An Approach to Endow Rubbery Materials with Properties of Rigid Polymers. 2020 , 12, 27286-27299	19
677	Constructing Gas Molecule Transport Channels in Thermally Rearranged Multiblock Poly(benzoxazole-co-imide) Membranes for Effective CO ₂ /CH ₄ Separation. 2020 , 8, 9669-9679	6
676	The influence of cations intercalated in graphene oxide membranes in tuning H ₂ /CO ₂ separation performance. 2020 , 246, 116933	15
675	Synthetic polymer-based membranes for acidic gas removal. 2020 , 173-190	
674	Synthetic polymeric membranes for gas and vapor separations. 2020 , 217-272	1
673	Polymeric composite membranes for gas separation: State-of-the-art 2D fillers. 2020 , 293-306	
672	Recent Advances in Gas Separation via Supported Liquid Membranes. 2020 , 37-71	
671	Highly permeable innovative PDMS coated polyethersulfone membranes embedded with activated carbon for gas separation. 2020 , 81, 103406	15
670	Enhancing H ₂ -permselectivity of high-flux hollow fiber membrane via in-situ layer-by-layer surface treatment. <i>Journal of Membrane Science</i> , 2020 , 615, 118312	9.6 4
669	Recent progress in microporous polymers from thermally rearranged polymers and polymers of intrinsic microporosity for membrane gas separation: Pushing performance limits and revisiting trade-off lines. 2020 , 58, 2450-2466	24
668	Nickel-Based Metal-Organic Frameworks to Improve the CO ₂ /CH ₄ Separation Capability of Thin-Film Pebax Membranes. 2020 , 59, 12834-12844	15
667	Hydrogen Permeability of Mixed Matrix Membranes Containing Metal Doped MOF-5. 2020 , 9, 1-4	
666	Synthesis and gas separation performance of intrinsically microporous polyimides derived from sterically hindered binaphthalenetetracarboxylic dianhydride. 2020 , 11, 4172-4179	4

665	Pervaporation and pervaporation-assisted esterification processes using nanocomposite membranes. 2020 , 301-327		
664	Recent progress in the development of nanocomposite membranes. 2020 , 29-67		3
663	Thermally annealed polyimide-based mixed matrix membrane containing ZIF-67 decorated porous graphene oxide nanosheets with enhanced propylene/propane selectivity. <i>Journal of Membrane Science</i> , 2020 , 603, 118019	9.6	17
662	Gas transport properties of mixed matrix membranes based on thermally rearranged poly(hydroxyimide)s filled with inorganic porous particles. 2020 , 242, 116778		9
661	Lithium chloride (LiCl)-modified polyethersulfone (PES) substrate surface pore architectures on thin poly(dimethylsiloxane) (PDMS) dense layer formation and the composite membrane's performance in gas separation.. 2020 , 10, 9500-9511		2
660	Thermally rearranged polymer membranes containing highly rigid biphenyl ortho-hydroxyl diamine for hydrogen separation. <i>Journal of Membrane Science</i> , 2020 , 604, 118053	9.6	21
659	Tailored CO ₂ -Philic Anionic Poly(ionic liquid) Composite Membranes: Synthesis, Characterization, and Gas Transport Properties. 2020 , 8, 5954-5965		18
658	Effects of phenylenediamines and alkoxysilanes on gas transport properties of polyimide - silica hybrid membranes. 2020 , 137, 49168		0
657	Gas Separation via Hybrid MetalOrganic Framework/Polymer Membranes. 2020 , 2, 254-269		38
656	Corrosion protection of steel pipelines with metal-polymer composite barrier liners. 2020 , 81, 103407		6
655	Polymers of Intrinsic Microporosity (PIMs). 2020 , 202, 122736		35
654	Influence of Aliphatic and Aromatic Fluorine Groups on Gas Permeability and Morphology of Fluorinated Polyimide Films. 2020 , 53, 5085-5095		12
653	MOF-Based Membranes for Gas Separations. 2020 , 120, 8161-8266		255
652	Intermediate thermal manipulation of polymers of intrinsic microporous (PIMs) membranes for gas separations. 2020 , 66, e16543		48
651	Energy-efficient separation alternatives: metal-organic frameworks and membranes for hydrocarbon separation. 2020 , 49, 5359-5406		148
650	Cardo-type porous organic nanospheres: Tailoring interfacial compatibility in thermally rearranged mixed matrix membranes for improved hydrogen purification. <i>Journal of Membrane Science</i> , 2020 , 612, 118414	9.6	5
649	Greatly Enhanced Gas Selectivity in Mixed-Matrix Membranes through Size-Controlled Hyper-cross-linked Polymer Additives. 2020 , 59, 13773-13782		7
648	Introduction. 2020 , 1-19		

647	Metal Organic Framework - Based Mixed Matrix Membranes for Carbon Dioxide Separation: Recent Advances and Future Directions. 2020 , 8, 534		24
646	Covalent-organic frameworks (COFs)-based membranes for CO ₂ separation. 2020 , 41, 101224		14
645	Hydrocarbon separations by glassy polymer membranes. 2020 , 58, 2482-2517		7
644	Insights into the relationship between structure and properties of Spirobichroman-based polyimides: Effects of substituents on molecular structure and gas separation. 2020 , 194, 108933		9
643	Materials informatics approach to understand aluminum alloys. 2020 , 21, 540-551		7
642	Pure and mixed gas permeation study of silica incorporated polyurethane-urea membrane modified by MOCA chain extender. 2020 , 98, 1543-1557		2
641	Stretched ZIF-8@GO flake-like fillers via pre-Zn(II)-doping strategy to enhance CO ₂ permeation in mixed matrix membranes. <i>Journal of Membrane Science</i> , 2020 , 601, 117934	9.6	20
640	Tunable sour gas separations: Simultaneous H ₂ S and CO ₂ removal from natural gas via crosslinked telechelic poly(ethylene glycol) membranes. <i>Journal of Membrane Science</i> , 2020 , 602, 117947	9.6	21
639	Fabrication and characterization of superhydrophobic PDMS composite membranes for efficient ethanol recovery via pervaporation. 2020 , 241, 116675		22
638	Two-Dimensional Microporous Material-based Mixed Matrix Membranes for Gas Separation. 2020 , 15, 2303-2315		9
637	PIM-1 as an organic filler to enhance CO ₂ separation performance of poly (arylene fluorene ether ketone). 2020 , 242, 116766		5
636	Fast synthesis of thin all-silica DDR zeolite membranes by co-template strategy. 2020 , 298, 110091		10
635	Enhanced Gas Separation Properties of Triphenylamine Base Polymer Membranes Derived from Pure Triptycene Diamine Regioisomers. 2020 , 53, 1573-1584		17
634	High gas permeability of nanoZIF-8/polymer-based mixed matrix membranes intended for biogas purification. 2020 , 40, 459-467		5
633	. 2020 ,		2
632	Polymeric amine membrane materials for carbon dioxide (CO ₂)/methane (CH ₄) separation. 2020 , 51, 66-72		4
631	Field-enhanced selectivity in nanoconfined ionic transport. 2020 , 12, 6512-6521		5
630	Ionic polyimide membranes containing Triphenylamine's base: Synthesis, microstructure and potential application in CO ₂ separation. <i>Journal of Membrane Science</i> , 2020 , 602, 117967	9.6	14

629	Polymer genomeBased prediction of gas permeabilities in polymers. 2020 , 40, 451-457	13
628	High performance MIL-101(Cr)@6FDA-mPD and MOF-199@6FDA-mPD mixed-matrix membranes for CO/CH separation. 2020 , 49, 1822-1829	11
627	Advanced porous polymer membranes from self-assembling block copolymers. 2020 , 102, 101219	63
626	Tuning of Nano-Based Materials for Embedding Into Low-Permeability Polyimides for a Featured Gas Separation. 2019 , 7, 897	34
625	1,3-Propane Diamine/1,4-Butane Diamine Cross-linking Modification of Polyimide Membrane for Hydrogen Selective Separation: Effect of Diamine Mixture Ratio. 2020 , 15, e2411	
624	Perspective of mixed matrix membranes for carbon capture. 2020 , 14, 460-469	2
623	Controlling Gas Selectivity in Molecular Porous Liquids by Tuning the Cage Window Size. 2020 , 59, 7362-7366	35
622	Long-Term Study of Container Closure Integrity of Rubber-Glass Vial Systems by Multiple Methods. 2020 , 74, 147-161	
621	Functionalized ZIF-7/Pebax 2533 mixed matrix membranes for CO ₂ /N ₂ separation. 2020 , 297, 110030	33
620	Zeolite imidazolate framework (ZIF)-based mixed matrix membranes for CO ₂ separation: A review. 2020 , 137, 48968	24
619	Incorporating nano-sized ZIF-67 to enhance selectivity of polymers of intrinsic microporosity membranes for biogas upgrading. 2020 , 216, 115497	12
618	Ionic liquid-decorated nanocages for cooperative CO ₂ transport in mixed matrix membranes. 2020 , 239, 116539	19
617	Enhancement of dark fermentative H ₂ production by gas separation membranes: A review. 2020 , 302, 122828	15
616	Interlocking a synthesized polymer and bifunctional filler containing the same polymer's monomer for conformable hybrid membrane systems. 2020 , 8, 3942-3955	11
615	Top-Down Polyelectrolytes for Membrane-Based Post-Combustion CO Capture. 2020 , 25,	10
614	Two-Dimensional Membranes: New Paradigms for High-Performance Separation Membranes. 2020 , 15, 2241-2270	17
613	Dendritic silver self-assembly in molten-carbonate membranes for efficient carbon dioxide capture. 2020 , 13, 1766-1775	10
612	Synthesis and property of novel gas mixed-matrix membrane with carbon nanotubes. 2020 , 27, 1	1

611	Membranes for toxic- and heavy-metal removal. 2020 , 125-149		5
610	Novel fluorinated aromatic polymers with ether-bond-free aryl backbones for pure and mixed gas separation. <i>Journal of Membrane Science</i> , 2020 , 606, 118114	9.6	4
609	Effect of deep eutectic solvents hydrogen bond acceptor on the anhydrous proton conductivity of Nafion membrane for fuel cell applications. <i>Journal of Membrane Science</i> , 2020 , 605, 118116	9.6	12
608	Interfacial analysis of mixed-matrix membranes under exposure to high-pressure CO ₂ . <i>Journal of Membrane Science</i> , 2020 , 607, 118147	9.6	9
607	Synthesis and gas separation properties of OH-functionalized Tröger's base-based PIMs derived from 1,1'-binaphthalene-2,2'-OH. 2020 , 193, 122369		8
606	Ultrathin permselective membranes: the latent way for efficient gas separation.. 2020 , 10, 12653-12670		46
605	Enhancing the Separation Performance of Glassy PPO with the Addition of a Molecular Sieve (ZIF-8): Gas Transport at Various Temperatures. 2020 , 10,		7
604	Leveraging Nanocrystal HKUST-1 in Mixed-Matrix Membranes for Ethylene/Ethane Separation. 2020 , 10,		14
603	Facile Synthesis and Study of Microporous Catalytic Arene-Norbornene Annulation Tröger Base Ladder Polymers for Membrane Air Separation. 2020 , 9, 680-685		23
602	Enhanced O/N Separation of Mixed-Matrix Membrane Filled with Pluronic-Compatibilized Cobalt Phthalocyanine Particles. 2020 , 10,		13
601	Influence of solvent and nanoparticles on the morphology and gas separation properties of copolyimide membranes. 2020 , 137, 49337		5
600	Gas Transport in Mixed Matrix Membranes: Two Methods for Time Lag Determination. 2020 , 8, 28		6
599	Coordination-Driven Self-Assembly in Polymer-Inorganic Hybrid Materials 2020 , 32, 3680-3700		35
598	Development of advanced nanocomposite membranes by carbon-based nanomaterials (CNTs and GO). 2020 , 145-162		0
597	Separation of bio-based chemicals using pervaporation. 2020 , 95, 2311-2334		8
596	Enhancement in the selectivity of O/N via ZIF-8/CA mixed-matrix membranes and the development of a thermodynamic model to predict the permeability of gases. 2020 , 27, 24413-24429		3
595	Synthesis route for the fabrication of nanocomposite membranes. 2020 , 69-89		4
594	Prospects of nanocomposite membranes for natural gas treatment. 2020 , 355-378		1

593	Prospects of nanocomposite membranes for nitrogen and oxygen enrichment. 2020 , 379-396		1
592	Enhancing the gas separation properties of mixed matrix membranes via impregnation of sieve phases with metal and nonmetal promoters. 2020 , 245, 116859		5
591	How to coordinate the trade-off between water permeability and salt rejection in nanofiltration?. 2020 , 8, 8831-8847		65
590	Water Treatment: Are Membranes the Panacea?. 2020 , 11, 559-585		23
589	Covalent Organic Frameworks in Separation. 2020 , 11, 131-153		19
588	Effect of Bridgehead Methyl Substituents on the Gas Permeability of Tröger's-Base Derived Polymers of Intrinsic Microporosity. 2020 , 10,		4
587	Comparative performance of commercial polymeric membranes in the recovery of industrial hydrogen waste gas streams. 2021 , 46, 17507-17521		18
586	Evaluation of silica sodalite infused polysulfone mixed matrix membranes during H ₂ /CO ₂ separation. 2021 , 38, 522-527		6
585	CO from waste to resource by developing novel mixed matrix membranes. 2021 , 28, 12397-12405		4
584	Mixed substituent ether-containing polyphosphazene/poly(bis-phenoxyphosphazene) blends as membranes for CO ₂ separation from N ₂ . 2021 , 138, 50207		1
583	Potential of adsorbents and membranes for SF ₆ capture and recovery: A review. 2021 , 404, 126577		17
582	Carbon molecular sieve membranes derived from crosslinkable polyimides for CO ₂ /CH ₄ and C ₂ H ₄ /C ₂ H ₆ separations. <i>Journal of Membrane Science</i> , 2021 , 621, 118785	9.6	9
581	Pore model for nanofiltration: History, theoretical framework, key predictions, limitations, and prospects. <i>Journal of Membrane Science</i> , 2021 , 620, 118809	9.6	23
580	Free volume manipulation of a 6FDA-HAB polyimide using a solid-state protection/deprotection strategy. 2021 , 212, 123121		4
579	Self-assembly of defect-free polymer-based zeolite imidazolate framework composite membranes with metal-phenolic networks for high efficient H ₂ /CH ₄ separation. <i>Journal of Membrane Science</i> , 2021 , 617, 118612	9.6	14
578	Hydrogen-bonded polyamide 6/Zr-MOF mixed matrix membranes for efficient natural gas dehydration. 2021 , 285, 119161		8
577	Leveraging Free Volume Manipulation to Improve the Membrane Separation Performance of Amine-Functionalized PIM-1. 2021 , 60, 6593-6599		10
576	Synthesis of imidazolium-mediated Poly(benzoxazole) Ionene and composites with ionic liquids as advanced gas separation membranes. 2021 , 214, 123239		3

575	A mini-review on recent developments in SAPO-34 zeolite membranes and membrane reactors. 2021 , 6, 52-66		17
574	The evolution of the structure, mechanical, and gas separation properties of P84 hollow fiber membranes from the polymer to the carbon stage. 2021 , 256, 117741		1
573	Hierarchical ZIF-8 composite membranes: Enhancing gas separation performance by exploiting molecular dynamics in hierarchical hybrid materials. <i>Journal of Membrane Science</i> , 2021 , 620, 118943	9.6	4
572	The influence of pore aperture, volume and functionality of isorecticular gmelinite zeolitic imidazolate frameworks on the mixed gas CO ₂ /N ₂ and CO ₂ /CH ₄ separation performance in mixed matrix membranes. 2021 , 260, 118103		5
571	Effect of incorporating different ZIF-8 crystal sizes in the polymer of intrinsic microporosity, PIM-1, for CO ₂ /CH ₄ separation. 2021 , 312, 110761		12
570	Leveraging Free Volume Manipulation to Improve the Membrane Separation Performance of Amine-Functionalized PIM-1. 2021 , 133, 6667-6673		3
569	A Physical Entangling Strategy for Simultaneous Interior and Exterior Modification of Metal-Organic Framework with Polymers. 2021 , 60, 7389-7396		11
568	Unprecedented gas separation performance of a difluoro-functionalized triptycene-based ladder PIM membrane at low temperature. 2021 , 9, 5404-5414		14
567	Fabrication and characterization of highly efficient three component CuBTC/graphene oxide/PSF membrane for gas separation application. 2021 , 46, 2244-2254		14
566	Graphene-Based Advanced Membrane Applications in Organic Solvent Nanofiltration. 2021 , 31, 2006949		29
565	Synthesis and gas separation performances of intrinsically microporous polyimides based on 4-methylcatechol-derived monomers. <i>Journal of Membrane Science</i> , 2021 , 620, 118825	9.6	3
564	Formation of electrically conductive hollow fiber membranes via crossflow deposition of carbon nanotubes [Addressing the conductivity/permeability trade-off. <i>Journal of Membrane Science</i> , 2021 , 620, 118859	9.6	2
563	Amine-based capture of CO ₂ for utilization and storage. 2021 , 53, 93-102		20
562	Nanoconfined deep eutectic solvent in laminated MXene for efficient CO ₂ separation. 2021 , 405, 126961		24
561	Composite porous nanostructures as multi-action adsorbents and membrane fillers for carbon dioxide separation: Comparative performance of metal organic framework [graphene oxide hybrids. 2021 , 37, 4044-4048		3
560	Preparation and characterization of polyimide membranes modified by a task-specific ionic liquid based on Schiff base for CO/N separation. 2021 , 28, 738-753		6
559	Sulfonyl PIM-1: A diverse separation membrane with dilation resistance. 2021 , 67, e17006		2
558	The spirochroman-based polyimides with different side groups: from structure-property relationships to chain packing and gas transport performance.. 2021 , 11, 5086-5095		0

557	Artificial channels for confined mass transport at the sub-nanometre scale. 2021 , 6, 294-312	57
556	Mixed-Matrix Membranes. 2021 , 87-113	0
555	Synthesis and enhanced CO ₂ /CH ₄ selectivity of hyperbranched copolyimide membranes. 2021 , 33, 675-684	
554	A high-throughput screening of metal-organic framework based membranes for biogas upgrading. 2021 , 231, 235-257	2
553	Smart polymeric composite membranes for wastewater treatment. 2021 , 313-350	3
552	CO ₂ gas separation using mixed matrix membranes based on polyethersulfone/MIL-100(Al). 2021 , 19, 307-321	5
551	Membrane Fouling in Desalination. 2021 , 39-52	0
550	Organic molecular sieve membranes for chemical separations. 2021 , 50, 5468-5516	55
549	Melt-quenched porous organic cage glasses. 2021 , 9, 19807-19816	4
548	Substituted polynorbornene membranes: a modular template for targeted gas separations. 2021 , 12, 2947-2977	12
547	Composite hollow fibers for gas separation. 2021 , 385-405	
546	Carbon capture Using Metal-Organic Frameworks. 2021 , 155-204	0
545	Enhanced gas separation and mechanical properties of fluorene-based thermal rearrangement copolymers.. 2021 , 11, 13164-13174	2
544	Fabrication and function of polymer membranes. 2021 , 3, 141-154	3
543	Ligand-Controlled Electrochromic Diversification with Multilayer Coated Metallosupramolecular Polymer Assemblies. 2021 , 13, 5245-5255	5
542	Microporous Polymers for Gas Separation Membranes: Overview and Advances. 2021 , 1527-1555	
541	Recent advances in simulating gas permeation through MOF membranes. 2021 , 2, 5300-5317	3
540	Effect of halloysite nanotubes incorporation on morphology and CO ₂ /CH ₄ separation performance of Pebax-based membranes. 2021 , 38, 104-113	6

539	Polymer nanocomposite membranes for wastewater treatment. 2021 , 605-672	
538	Gas transport properties of thermally rearranged (TR) polybenzoxazole silica hybrid membranes. 2021 , 214, 123274	1
537	A Review on Glassy and Rubbery Polymeric Membranes for Natural Gas Purification. 2021 , 8, 90-109	3
536	Effect of silica nanoparticles on carbon dioxide separation performances of PVA/PEG cross-linked membranes. 2021 , 75, 3131-3153	10
535	Recovery of free volume in PIM-1 membranes through alcohol vapor treatment. 2021 , 15, 872-881	6
534	Ethylene/propylene separation using mixed matrix membranes of poly (ether block amide)/nano-zeolite (NaY or NaA). 2021 , 38, 576-586	0
533	A Physical Entangling Strategy for Simultaneous Interior and Exterior Modification of Metal-Organic Framework with Polymers. 2021 , 133, 7465-7472	3
532	The utilization of micro-mesoporous carbon-based filler in the P84 hollow fibre membrane for gas separation. 2021 , 8, 201150	2
531	Membranes Technologies for Efficient CO ₂ Capture/Conversion. 2021 , 55-83	0
530	Gas Separation by Mixed Matrix Membranes with Porous Organic Polymer Inclusions within -Hydroxypolyamides Containing -Terphenyl Moieties. 2021 , 13,	1
529	6FDA-DAM:DABA Co-Polyimide Mixed Matrix Membranes with GO and ZIF-8 Mixtures for Effective CO/CH Separation. 2021 , 11,	5
528	Tailoring the Microporosity of Polymers of Intrinsic Microporosity for Advanced Gas Separation by Atomic Layer Deposition. 2021 , 133, 18019-18024	0
527	Water vapor dehumidification using thin-film nanocomposite membranes by the in situ formation of ultrasmall size iron-chelated nanoparticles. 2021 , 542, 148562	4
526	Effect of thermal annealing on gas separation performance and aggregation structures of block polyimide membranes. 2021 , 219, 123538	7
525	Ion-Selective MXene-Based Membranes: Current Status and Prospects. 2021 , 6, 2001189	11
524	Novel mixed matrix membranes based on polyethersulfone and MIL-96 (Al) for CO ₂ gas separation. 2021 , 75, 3337-3351	6
523	Highly selective laser-induced graphene (LIG)/polysulfone composite membrane for hydrogen purification. 2021 , 22, 100971	2
522	Ultrahigh Carbon Dioxide-Selective Composite Membrane Containing a ECD-MOF Layer. 2021 , 13, 13034-130436	

521	Superior Pebax-1657/amine-modified halloysite nanotubes mixed-matrix membranes to improve the CO ₂ /CH ₄ separation efficiency. 2021 , 138, 50749		3
520	Challenges in membrane-based liquid phase separations. 2021 , 2, 3-13		4
519	High-performance porous carbon-zeolite mixed-matrix membranes for CO ₂ /N ₂ separation. <i>Journal of Membrane Science</i> , 2021 , 622, 119031	9.6	14
518	Transport parameters and models of physical aging of additive polytricyclononene with SiMe ₃ groups. 2021 , 217, 123447		2
517	Bioinspired and biomimetic membranes for water purification and chemical separation: A review. 2021 , 15, 1		9
516	Tailoring the Microporosity of Polymers of Intrinsic Microporosity for Advanced Gas Separation by Atomic Layer Deposition. 2021 , 60, 17875-17880		6
515	Membranes. 2021 , 203-240		
514	Remarkably enhanced gas separation properties of PIM-1 at sub-ambient temperatures. <i>Journal of Membrane Science</i> , 2021 , 623, 119091	9.6	12
513	Tuning the permeability of regular polymeric networks by the cross-link ratio. 2021 , 154, 154902		4
512	Combined Vapor Permeation and Continuous Solid-State Distillation for Energy-Efficient Bioethanol Production. 2021 , 14, 2266		2
511	Chitosan-Based Nanocomposite Polymeric Membranes for Water Purification-A Review. 2021 , 14,		12
510	Activated carbon and halloysite nanotubes membrane for CO ₂ and CH ₄ separation. 2021 , 1142, 012012		1
509	The prospect of synthesis of PES/PEG blend membranes using blend NMP/DMF for CO ₂ /N ₂ separation. 2021 , 28, 1		3
508	Exploring the Potential Application of Matrimid and ZIFs-Based Membranes for Hydrogen Recovery: A Review. 2021 , 13,		6
507	Influence of Casting Solvents on CO/CH Separation Using Polysulfone Membranes. 2021 , 11,		0
506	Novel Positively Charged Metal-Coordinated Nanofiltration Membrane for Lithium Recovery. 2021 , 13, 16906-16915		13
505	Synthesis and preliminary gas permeation properties of vitreous composite clinoptilolite membranes. 1-19		
504	Adsorption space for microporous polymers with diverse adsorbate species. 2021 , 7,		6

503	Polyimide-Based Membrane Materials for CO Separation: A Comparison of Segmented and Aromatic (Co)polyimides. 2021 , 11,	4
502	Carbon Molecular Sieve Membranes Comprising Graphene Oxides and Porous Carbon for CO/N Separation. 2021 , 11,	4
501	Ongoing progress on novel nanocomposite membranes for the separation of heavy metals from contaminated water. 2021 , 270, 129421	53
500	Advanced mixed matrix membranes of Pebax embedded with amino acid ionic liquids@PIM core-shell composite nanoparticles for CO ₂ separation. 2021 , 263, 118350	10
499	[EMIM][Tf2N]-Modified Silica as Filler in Mixed Matrix Membrane for Carbon Dioxide Separation. 2021 , 11,	1
498	Xenon and Krypton separation by membranes at sub-ambient temperatures and its comparison with cryogenic distillation. 2021 , 262, 118349	0
497	One-step synthesis of hydroxyl-functionalized fully carbon main chain PIMs via a Friedel-Crafts reaction for efficient gas separation. 2021 , 262, 118313	6
496	Influence of solvent, Lewis acid-base complex, and nanoparticles on the morphology and gas separation properties of polysulfone membranes. 2021 , 61, 1931-1942	
495	Nanofluidics for Gas Separation Applications: The Molecular Dynamics Simulation Perspective. 1-16	0
494	Immobilization of carbonic anhydrase for CO ₂ capture and its industrial implementation: A review. 2021 , 47, 101475	18
493	Current and future trends in polymer membrane-based gas separation technology: A comprehensive review. 2021 , 98, 103-129	27
492	An Analysis of the Effect of ZIF-8 Addition on the Separation Properties of Polysulfone at Various Temperatures. 2021 , 11,	0
491	Review: Mixed-Matrix Membranes with CNT for CO Separation Processes. 2021 , 11,	2
490	Performance of polysulfone hollow fiber membranes encompassing ZIF-8, SiO ₂ /ZIF-8, and amine-modified SiO ₂ /ZIF-8 nanofillers for CO ₂ /CH ₄ and CO ₂ /N ₂ gas separation. 2021 , 264, 118471	22
489	Investigation of the silica pore size effect on the performance of polysulfone (PSf) mixed matrix membranes (MMMs) for gas separation. 2021 , 41, 627-636	0
488	Gas transport parameters, density and free volume of nanocrystalline poly-2,6-dimethylphenylene oxide. 2021 , 226, 123804	9
487	Towards a High Rejection Desalination Membrane: The Confined Growth of Polyamide Nanofilm Induced by Alkyl-Capped Graphene Oxide. 2021 , 11,	
486	Imputation of missing gas permeability data for polymer membranes using machine learning. <i>Journal of Membrane Science</i> , 2021 , 627, 119207	9.6 9

485	Polycrystalline zeolite and metal-organic framework membranes for molecular separations. 2021 , 437, 213794		13
484	Intrinsically microporous polyimides derived from norbornane-2-spiro[4.5]undecan-2-one-2-spiro[2.2]norbornane-5,5',6,6'-tetracarboxylic dianhydride. 2021 , 228, 123955		1
483	Ultraparpermeable Polymers of Intrinsic Microporosity Containing Spirocyclic Units with Fused Triptycenes. 2021 , 31, 2104474		5
482	Development of CO-Selective Polyimide-Based Gas Separation Membranes Using Crown Ether and Polydimethylsiloxane. 2021 , 13,		1
481	Enhanced Performance of Carbon Molecular Sieve Membranes Incorporating Zeolite Nanocrystals for Air Separation. 2021 , 11,		3
480	Highly permeable and selective polymeric blend mixed matrix membranes for CO ₂ /CH ₄ separation. 2021 , 75, 5663-5685		0
479	A Comprehensive Review of Polymeric Wastewater Purification Membranes. 2021 , 5, 162		7
478	Polymeric membranes for CO ₂ separation and capture. <i>Journal of Membrane Science</i> , 2021 , 628, 119244-9.6		58
477	Graphene - based membranes for carbon dioxide separation. 2021 , 49, 101544		6
476	Selective membranes in water and wastewater treatment: Role of advanced materials. 2021 , 50, 516-516		15
475	A Prospective Concept on the Fabrication of Blend PES/PEG/DMF/NMP Mixed Matrix Membranes with Functionalised Carbon Nanotubes for CO/N Separation. 2021 , 11,		
474	Fabrication of Pebax/SAPO mixed matrix membranes for CO ₂ /N ₂ separation. 2021 , 138, 51336		4
473	In-situ generation of polymer molecular sieves in polymer membranes for highly selective gas separation. <i>Journal of Membrane Science</i> , 2021 , 630, 119302	9.6	8
472	Ultraparpermeable polymeric membranes based on particular ultra-rigid units for enhanced gas separation. <i>Journal of Membrane Science</i> , 2021 , 629, 119284	9.6	4
471	Recent Advances in Polymer-Inorganic Mixed Matrix Membranes for CO Separation. 2021 , 13,		9
470	Influence of ZIF-95 on structure and gas separation properties of polyimide-based mixed matrix membranes. 2021 , 91, 103941		6
469	Fast synthesis of thin SSZ-13 membranes by a hot-dipping method. <i>Journal of Membrane Science</i> , 2021 , 629, 119297	9.6	8
468	Poly(ether-block-amide) Copolymer Membranes in CO ₂ Separation Applications.		4

467	Improved oxygen permeation of a multi-stranded network two-dimensional polymer synthesized by three-step polymerizations of a novel monomer bearing three different polymerizable groups followed by photoexfoliation. 2021 , 228, 123857	0
466	The potential of additively manufactured membranes for selective separation and capture of CO ₂ . 2021 , 11, 391-401	4
465	Improvement of oxygen permselectivity of a rigid helical polyphenylacetylene: Effect of flexible groups, degree of polymerization, composites, thickness, orientation, and network formation. 2021 , 228, 123900	0
464	Synthesis and Gas Transport Properties of Copolymers of Polybenzodioxane PIM-1 and Tetrahydroanthracene. 2021 , 3, 199-205	
463	Thermally Cross-Linked Amidoxime-Functionalized Polymers of Intrinsic Microporosity Membranes for Highly Selective Hydrogen Separation. 2021 , 9, 9426-9435	3
462	Recent Progress on Polymers of Intrinsic Microporosity and Thermally Modified Analogue Materials for Membrane-Based Fluid Separations. 2021 , 2, 2100049	24
461	Development of a Micro-Double-Network Ion Gel-Based CO ₂ Separation Membrane from Nonvolatile Network Precursors. 2021 , 60, 12640-12649	6
460	Inorganic/Organic Micro-Double-Network Ion Gel-Based Composite Membrane with Enhanced Mechanical Strength and CO ₂ Permeance. 2021 , 60, 12698-12708	3
459	Permselectivity improvement of PEBAX 2533 membrane by addition of glassy polymers (Matrimid and polystyrene) for CO ₂ /N ₂ separation. 2022 , 139, 51556	0
458	Fabrication of hybrid membranes based on poly(ether-sulfone)/Materials Institute Lavoisier (MIL-53)(Al) and its enhanced CO ₂ gas separation performance. 2021 , 75, 6519	2
457	Supported liquid membranes comprising of choline chloride based deep eutectic solvents for CO ₂ capture: Influence of organic acids as hydrogen bond donor. 2021 , 335, 116155	6
456	High Permeance or High Selectivity? Optimization of System-Scale Nanofiltration Performance Constrained by the Upper Bound.	5
455	Cellulose acetate-based membranes by interfacial engineering and integration of ZIF-62 glass nanoparticles for CO separation. 2021 , 415, 125639	29
454	The Phase Structural Evolution and Gas Separation Performances of Cellulose Acetate/Polyimide Composite Membrane from Polymer to Carbon Stage. 2021 , 11,	0
453	Application of the dynamic mean field theory to fluid transport in slit pores. 2021 , 155, 074702	1
452	Recent Progress in Mixed-Matrix Membranes for Hydrogen Separation. 2021 , 11,	7
451	A continuous process for manufacturing proton-exchange membranes featuring z-direction-aligned, proton-conducting particles or polymers.	0
450	Tracing the influence of extra-framework cations on N ₂ and O ₂ adsorption characteristics under plateau environment by GCMC simulations. 2021 , 647, 1906	

449	Enhancing polyimide-based mixed matrix membranes performance for CO ₂ separation containing PAF-1 and p-DCX. 2021 , 268, 118677		0
448	Application of Metal-Organic Framework-Based Composites for Gas Sensing and Effects of Synthesis Strategies on Gas-Sensitive Performance. 2021 , 9, 226		3
447	Graphene Oxide and its Derivatives for Gas Separation Membranes. 2021 , 8, 490		1
446	Fabrication, permeation, and corrosion stability measurements of silica membranes for HI decomposition in the thermochemical iodine-sulfur process. 2021 , 46, 28435-28449		2
445	Structure-Property Relationship on the Example of Gas Separation Characteristics of Poly(Arylene Ether Ketone)s and Poly(Diphenylene Phtalide). 2021 , 11,		0
444	Exploring the potential of thin films made from poly(imide-amide-sulfone)s for engineering applications. 2021 , 270, 115217		1
443	State of the art and prospects of chemically and thermally aggressive membrane gas separations: Insights from polymer science. 2021 , 229, 123988		4
442	Modified Graphene Oxide-Incorporated Thin-Film Composite Hollow Fiber Membranes through Interface Polymerization on Hydrophilic Substrate for CO Separation. 2021 , 11,		2
441	Membrane Materials for Selective Ion Separations at the Water-Energy Nexus. 2021 , 33, e2101312		24
440	Gas separation performance of copolymers of perfluoro(butenyl vinyl ether) and perfluoro(2,2-dimethyl-1,3-dioxole). <i>Journal of Membrane Science</i> , 2021 , 634, 119401	9.6	5
439	Low-Temperature H ₂ S/CO ₂ /CH ₄ Separation in Mixed-Matrix Membranes Containing MFU-4. 2021 , 33, 6825-6831		4
438	Key Features of Polyimide-Derived Carbon Molecular Sieves. 2021 , 133, 22496-22505		
437	Macromolecular Design for Oxygen/Nitrogen Permselective Membranes-Top-Performing Polymers in 2020. 2021 , 13,		0
436	Gas separation performance of carbon dioxide-selective poly(vinyl alcohol) /ionic liquid blend membranes: The effect of temperature, feed pressure and humidity. 2021 , 270, 118812		7
435	Highly selective hollow fiber membranes for carbon capture via in-situ layer-by-layer surface functionalization. <i>Journal of Membrane Science</i> , 2021 , 633, 119381	9.6	6
434	Ultrahigh hydrogen and nitrogen selectivity achieved by the nanoporous graphene with a precise nanopore. 2021 , 182, 628-633		1
433	A comprehensive modeling approach for determining the role and nature of interfacial morphology in mixed matrix membranes. 2021 , 197, 110590		3
432	In-situ formation of asymmetric thin-film, mixed-matrix membranes with ZIF-8 in dual-functional imidazole-based comb copolymer for high-performance CO ₂ capture. <i>Journal of Membrane Science</i> , 2021 , 642, 119913	9.6	6

431	Penttiptycene-based ladder polymers with configurational free volume for enhanced gas separation performance and physical aging resistance. 2021 , 118,		10
430	Highly Permeable Mixed Matrix Membranes of Thermally Rearranged Polymers and Porous Polymer Networks for Gas Separations.		4
429	Screening and Design of COF-Based Mixed-Matrix Membrane for CH ₄ /N ₂ Separation. 2021 ,		0
428	Aqueous Environments. 2021 , 29-55		
427	Maximizing selectivity: An analysis of isoporous membranes. <i>Journal of Membrane Science</i> , 2021 , 633, 119389	9.6	10
426	Development of Breathable Pebax/PEG Films for Optimization of the Shelf-Life of Fresh Agri-Food Products. 2021 , 11,		1
425	Synthesis and Oxygen Permeation of Novel Alternating Copolymers Containing Disiloxane and Imido Groups by Hydrosilylation Polyaddition. 2021 , 50, 1617-1619		
424	Ultra-high permeance metal coated porous graphene membranes with tunable gas selectivities. 2021 , 7, 2385-2394		2
423	CO ₂ separation by mixed matrix membranes incorporated with carbon nanotubes: a review of morphological, mechanical, thermal and transport properties. 1		0
422	Elimination of Grain Boundary Defects in Zeolitic Imidazolate Framework ZIF-95 Membrane via Solvent-Free Secondary Growth.		1
421	Hydrogen purification using natural zeolite-loaded hydroxyethyl cellulose membrane.		1
420	PEEK-WC-Based Mixed Matrix Membranes Containing Polyimine Cages for Gas Separation. 2021 , 26,		0
419	Key Features of Polyimide-Derived Carbon Molecular Sieves. 2021 , 60, 22322-22331		7
418	DC-Voltage-Induced High Oxygen Permeation through a Lanthanum Silicate Electrolyte with a Cerium Oxide Thin Film. 2021 , 89, 427-432		
417	CO ₂ separation of a novel Ultem-based mixed matrix membrane incorporated with Ni ²⁺ -exchanged zeolite X.		1
416	CO/N Gas Separation Using Pebax/ZIF-7-PSf Composite Membranes. 2021 , 11,		0
415	Mixed matrix membranes based on NH ₂ -MIL-53 (Al) and 6FDA-ODA polyimide for CO ₂ separation: Effect of the processing route on improving MOF-polymer interfacial interaction. 2021 , 270, 118786		12
414	Elimination of Grain Boundary Defects in Zeolitic Imidazolate Framework ZIF-95 Membrane via Solvent-Free Secondary Growth. 2021 , 60, 25463-25467		5

413	Current status of biogas upgrading for direct biomethane use: A review. 2021 , 149, 111343		36
412	Homoporous hybrid membranes containing metal-organic cages for gas separation. <i>Journal of Membrane Science</i> , 2021 , 636, 119564	9.6	7
411	MOF-based MMMs Breaking the Upper Bounds of Polymers for a Large Variety of Gas Separations. 2021 , 119811		3
410	A review of recent trends and emerging perspectives of ionic liquid membranes for CO ₂ separation. 2021 , 9, 105860		9
409	Review on the preparation of carbon membranes derived from phenolic resins for gas separation: From petrochemical precursors to bioresources. 2021 , 183, 12-33		3
408	Post-modification of PIM-1 and simultaneously in situ synthesis of porous polymer networks into PIM-1 matrix to enhance CO ₂ separation performance. <i>Journal of Membrane Science</i> , 2021 , 636, 119544	9.6	8
407	Significantly improved gas separation properties of sulfonated PIM-1 by direct sulfonation using SO ₃ solution. <i>Journal of Membrane Science</i> , 2021 , 635, 119440	9.6	6
406	Sealing Tröger base/ZIF-8 mixed matrix membranes defects for improved gas separation performance. <i>Journal of Membrane Science</i> , 2021 , 636, 119582	9.6	8
405	Poly (ether-block amide) thin-film membranes containing functionalized MIL-101 MOFs for efficient separation of CO ₂ /CH ₄ . 2021 , 9, 105820		7
404	Rigorous simulation and techno-economic evaluation on the hybrid membrane/cryogenic distillation processes for air separation. 2021 , 127, 56-68		2
403	Effect of immobilizing ionic liquid on amine-functionalized MIL-101(Cr) incorporated in Matrimid membranes for CO ₂ /CH ₄ separation. 2021 , 168, 108590		7
402	Helium separation using membrane technology: Recent advances and perspectives. 2021 , 274, 119044		5
401	SPEEK membranes by incorporation of NaY zeolite for CO ₂ /N ₂ separation. 2021 , 275, 119189		1
400	Imidazolium-based diphenylacetylene copolymers with excellent carbon dioxide/nitrogen and oxygen/nitrogen gas separation performance. <i>Journal of Membrane Science</i> , 2021 , 637, 119638	9.6	1
399	Graphene oxide reinforced facilitated transport membrane with poly(ionic liquid) and ionic liquid carriers for CO ₂ /N ₂ separation. <i>Journal of Membrane Science</i> , 2021 , 638, 119652	9.6	8
398	Supported deep eutectic liquid membranes with highly selective interaction sites for efficient CO ₂ separation. 2021 , 342, 117509		3
397	Thermal crosslinking membrane with enhanced CO ₂ separation performance derived from nitrile-containing phenolphthalein-based poly(arylene ether ketone). <i>Journal of Membrane Science</i> , 2021 , 637, 119634	9.6	1
396	Synthesis and gas separation properties of polyimide membranes derived from oxygencyclic pseudo-Tröger's base. <i>Journal of Membrane Science</i> , 2021 , 637, 119604	9.6	3

395	Sour mixed-gas upper bounds of glassy polymeric membranes. 2021 , 277, 119535		3
394	Solvent-processable 0D covalent organic framework quantum dot engineered composite membranes for biogas upgrading. <i>Journal of Membrane Science</i> , 2021 , 640, 119803	9.6	4
393	Enabling experimental characterization and prediction of ternary mixed-gas sorption in polymers: C ₂ H ₆ /CO ₂ /CH ₄ in PIM-1. 2021 , 426, 130715		5
392	CO ₂ /CH ₄ mixed-gas separation in PIM-1 at high pressures: Bridging atomistic simulations with process modeling. <i>Journal of Membrane Science</i> , 2021 , 640, 119838	9.6	3
391	Polycrystalline metal-organic framework (MOF) membranes for molecular separations: Engineering prospects and challenges. <i>Journal of Membrane Science</i> , 2021 , 640, 119802	9.6	12
390	MOF-based membranes for pervaporation. 2022 , 278, 119233		7
389	Polymers of intrinsic microporosity and thermally rearranged polymer membranes for highly efficient gas separation. 2022 , 278, 119513		10
388	Amino-functionalized NUS-8 nanosheets as fillers in PIM-1 mixed matrix membranes for CO ₂ separations. <i>Journal of Membrane Science</i> , 2022 , 641, 119912	9.6	5
387	Size-sieving separation of hard-sphere gases at low concentrations through cylindrically porous membranes. 2021 , 17, 10025-10031		1
386	Effects of different treatments of films of PIM-1 on its gas permeation parameters and free volume. 2021 , 212, 123271		2
385	Importance of small loops within PIM-1 topology on gas separation selectivity in thin film composite membranes.		7
384	Synthesis and gas permeation properties of tetraoxidethianthrene-based polymers of intrinsic microporosity. 2021 , 9, 2840-2849		5
383	Hydrogen sulfide removal from natural gas using membrane technology: a review. 2021 , 9, 20211-20240		1
382	Metal-organic cages for molecular separations. 2021 , 5, 168-182		58
381	A Review on Ionic Liquid Gas Separation Membranes. 2021 , 11,		21
380	An upper bound visualization of design trade-offs in adsorbent materials for gas separations: alkene/alkane adsorbents. 2021 , 57, 6950-6959		1
379	Metal-induced microporous aminosilica creates a highly permeable gas-separation membrane. 2021 , 5, 3029-3042		6
378	Design of interchain hydrogen bond in polyimide membrane for improved gas selectivity and membrane stability. <i>Journal of Membrane Science</i> , 2021 , 618, 118659	9.6	15

377	Recent progress and prospects of polymeric hollow fiber membranes for gas application, water vapor and particulate matters removal.	7
376	Si-Containing Polymers in Membrane Gas Separation. 373-398	2
375	Polymeric Membranes for Gas Separation, Water Purification and Fuel Cell Technology. 2451-2491	5
374	Controlling Gas Selectivity in Molecular Porous Liquids by Tuning the Cage Window Size. 2020 , 132, 7432-7436	15
373	Enhanced CO ₂ selectivity of polyimide membranes through dispersion of polyethyleneimine decorated UiO-66 particles. 2020 , 137, 49068	11
372	Advances in the Development of Modified Polyphenylene Oxide Membranes for Gas Separation Applications. 2001 , 105-147	2
371	Hybrid Membranes for Carbon Capture. 2019 , 85-120	1
370	Introduction. 2015 , 1-10	2
369	Hydrogen Separation Membranes of Polymeric Materials. 2017 , 85-116	3
368	Flow Configuration Influence on Darcian and Forchheimer Permeabilities Determination. 2017 , 87-94	2
367	The opportunity of membrane technology for hydrogen purification in the power to hydrogen (P2H) roadmap: a review. 2020 , 15, 1-19	9
366	Influence of functionalized SiO ₂ nanoparticles on the morphology and CO ₂ /CH ₄ separation efficiency of Pebax-based mixed-matrix membranes. 2020 , 37, 295-306	10
365	Membrane engineering: Latest advancements in gas separation and pre-treatment processes, petrochemical industry and refinery, and future perspectives in emerging applications. 2020 , 206, 106464	55
364	Tunable sieving of small gas molecules using horizontal graphene oxide membrane. <i>Journal of Membrane Science</i> , 2020 , 610, 118178	9.6 9
363	Facile synthesis and gas transport properties of H ₂ rich's base-derived intrinsically microporous polyimides. 2020 , 201, 122619	2
362	Excellent permselective membranes of diphenylacetylene copolymers with hydroxy groups. 2020 , 207, 122926	5
361	Hydration Effects on the Permselectivity-Conductivity Trade-Off in Polymer Electrolytes. 2020 , 53, 1014-1023	9
360	Microporous polymeric membranes inspired by adsorbent for gas separation. 2017 , 5, 13294-13319	61

- 359 Synthesis and gas permselectivity of CuBTC@PEBDF mixed matrix membranes. **2018**, 42, 12013-12023 11
- 358 Separation of CO₂ from CH₄ using a synthesized Pebax-1657/ZIF-7 mixed matrix membrane. **2017**, 35, 667-673 12
- 357 Review: recent advances in biogas purifying technologies. **2019**, 16, 401-412 59
- 356 Highly Permeable Polyheteroarylenes for Membrane Gas Separation: Recent Trends in Chemical Structure Design. **2020**, 62, 238-258 7
- 355 13 The Role of Molecular Thermodynamics in Developing Industrial Processes and Novel Products That Meet the Needs for a Sustainable Future. **2017**, 633-660 2
- 354 Hierarchical 5A Zeolite-Containing Carbon Molecular Sieve Membranes for O₂/N₂ Separation. **2020**, 30, 260-268 3
- 353 The CO₂/CH₄ Separation Potential of ZIF-8/Polysulfone Mixed Matrix Membranes at Elevated Particle Loading for Biogas Upgradation Process. **2021**, 10, 213-219 1
- 352 The effect of nanoparticles on gas permeability with polyimide membranes and network hybrid membranes: a review. **2021**, 41, 1-20 15
- 351 MOF-5 Based Matriksli Membranların Sentezi, Karakterizasyonu ve Gaz Ayırma Özellikleri. **6**, 415-423 1
- 350 Glassy PEEK-WC vs. Rubbery Pebax 1657 Polymers: Effect on the Gas Transport in CuNi-MOF Based Mixed Matrix Membranes. **2020**, 10, 1310 6
- 349 Metal and Covalent Organic Frameworks for Membrane Applications. **2020**, 10, 18
- 348 Present and Future Prospects of Hydrogen Production Process Constructed by the Combination of Photocatalytic H₂O Splitting and Membrane Separation Process. **2011**, 36, 113-121 5
- 347 Sorption-enhanced mixed-gas transport in amine functionalized polymers of intrinsic microporosity (PIMs). **2021**, 9, 23631-23642 1
- 346 A Highly Permeable Mixed Matrix Membrane Containing a Vertically Aligned Metal-Organic Framework for CO Separation. **2021**, 13, 50441-50450 1
- 345 Tailor the gas transport properties of network polyimide membranes via crosslinking center structure variation. **2022**, 282, 119993 2
- 344 Pure- and mixed-gas transport properties of a microporous Tröger's Base polymer (PIM-EA-TB). **2021**, 236, 124295 0
- 343 PIM-PI-1 and Poly(ethylene glycol)/Poly(propylene glycol)-Based Mechanically Robust Copolyimide Membranes with High CO-Selectivity and an Anti-aging Property: A Joint Experimental-Computational Exploration. **2021**, 13, 49890-49906 3
- 342 Gas Permeation Through Sulfonated Polyphenylene Oxide. **2001**, 61-104

341 Gaspermeation. **2004**, 437-493

340 Organic-inorganic nanocomposite membranes for molecular separation processes. **2006**, 76-96

339 SYNTHESIS,CHARACTERIZATION,AND GAS PERMEATION PROPERTIES OF COPOLYIMIDES. **2009**, 008, 753-758

338 Economic Evaluation. **2011**, 281-297

337 Algorithm for Solving the Model of Multistage Hollow Fiber Membrane Systems and the Identification of Model Parameters. **2011**, 466-476

o

336 ????????. **1992**, 41, 482-482

335 Gas Transport in Liquid Crystalline Polymers. **1994**, 219-231

o

334 Preparation of Silica-Based Membrane for H2 Separation by Multi-Step Pore Modification. **1998**, 797-804

333 Encyclopedia of Membranes. **2015**, 1-3

332 Poly(ionic liquid)s: Designing CO2 Separation Membranes. **2015**, 267-295

331 Encyclopedia of Membranes. **2015**, 1-3

330 Molecular Modeling of MetalOrganic Frameworks for Carbon Dioxide Separation Applications. **2015**, 339-379

329 Encyclopedia of Membranes. **2015**, 1-3

328 Encyclopedia of Membranes. **2015**, 1-13

327 Synthesis of Nanocomposite Membranes. **2015**, 84-103

326 Characterization of Nanocomposite Membranes. **2015**, 104-133

1

325 CHAPTER 9:Doping Polymers with Ionic Liquids to Manipulate Their Morphology and Membrane Gas Separation Properties. **2017**, 262-279

324 12 Carbon Capture. **2017**, 457-632

o

323	Gas Permeability through Mixed Matrix Membrane of Poly(dimethylsiloxane) with Aluminosilicate Hollow Nanoparticles. 2019 , 29, 51-60		
322	Fabrication of Polymeric Blend Membranes Using PBEM-POEM Comb Copolymer and Poly(ethylene glycol) for CO ₂ Capture. 2019 , 29, 223-230		2
321	Microporous Polymers for Gas Separation Membranes: Overview and Advances. 2020 , 1-29		1
320	Surfactant-mediated and wet-impregnation approaches for modification of ZIF-8 nanocrystals: Mixed matrix membranes for CO ₂ /CH ₄ separation. 2021 , 329, 111539		0
319	Nanoporous Polymeric Membranes for Hydrogen Separation. 2020 , 355-376		
318	Structural two-phase evolution of aminosilica-based silver-coordinated membranes for increased hydrogen separation. <i>Journal of Membrane Science</i> , 2022 , 642, 119962	9.6	4
317	Fabrication of a flexible hydrogen-bonded organic framework based mixed matrix membrane for hydrogen separation. <i>Journal of Membrane Science</i> , 2022 , 643, 120021	9.6	3
316	Transport Properties of Polymers. 2021 , 377-452		
315	Insights into the progress of polymeric nano-composite membranes for hydrogen separation and purification in the direction of sustainable energy resources. 2021 , 120029		2
314	Gas transport properties of truxene-based network polyimide membrane with flexible hexyl side chains. 2021 , 236, 124325		1
313	Gas permeation. 2007 , 447-506		
312	Gas sorption and diffusion in perfluoro(butenyl vinyl ether) based perfluoropolymeric membranes. <i>Journal of Membrane Science</i> , 2022 , 644, 120095	9.6	1
311	Ladder polymers of intrinsic microporosity from superacid-catalyzed Friedel-Crafts polymerization for membrane gas separation. <i>Journal of Membrane Science</i> , 2022 , 644, 120115	9.6	5
310	Highly permeable ZIF-8 membranes for propylene permselective pervaporation under high pressure up to 20 bar. <i>Journal of Membrane Science</i> , 2022 , 643, 120055	9.6	3
309	Polymer Materials for Membrane Separation of Gas Mixtures Containing CO ₂ . 2021 , 63, 181-198		1
308	Effect of Activation Process on the Performance of ZIF-8 Membrane for Propylene/Propane Separation. 2022 , 94, 166		1
307	Tailoring the micropore structure of 6FDA-based polyimide membrane for gas permselectivity studied by positron annihilation. 2021 , 120044		0
306	PEO-based CO ₂ -philic mixed matrix membranes comprising N-rich ultramicroporous polyaminals for superior CO ₂ capture. <i>Journal of Membrane Science</i> , 2021 , 644, 120111	9.6	1

305	1D continuous ZIF-8 tubes incorporated PDMS mixed matrix membrane for superior ethyl acetate pervaporation separation. 2021 , 282, 120127		1
304	Simultaneously enhanced CO ₂ permeability and CO ₂ /N ₂ selectivity at sub-ambient temperature from two novel functionalized intrinsic microporous polymers. <i>Journal of Membrane Science</i> , 2021 , 644, 120086	9.6	1
303	Performance optimization of imidazole containing copolyimide/functionalized ZIF-8 mixed matrix membrane for gas separations. <i>Journal of Membrane Science</i> , 2021 , 644, 120071	9.6	1
302	Surface tuning of silica by deep eutectic solvent to synthesize biomass derived based membranes for gas separation to enhance the circular bioeconomy. 2021 , 122355		1
301	Tuning the Transport Properties of Gases in Porous Graphene Membranes with Controlled Pore Size and Thickness. 2021 , e2106785		2
300	Novel Polymers with Ultrapermselectivity Based on Alternately Planar and Contorted Units for Gas Separation. 61-67		1
299	Current status and future directions of self-assembled block copolymer membranes for molecular separations. 2021 , 17, 10405-10415		2
298	Synthetic Guidelines for Highly Selective Mixed Matrix Membrane.		
297	Meta-Analysis of Electrically Conductive Membranes: A Comparative Review of Their Materials, Applications, and Performance.		
296	A comprehensive review on sustainability-motivated applications of SAPO-34 molecular sieve. 2022 , 57, 848		1
295	A review of the potential of conventional and advanced membrane technology in the removal of pathogens from wastewater.. 2022 , 286, 120454		5
294	Polynaphthoethylenebenzimidazoles for gas separation [Unexpected PIM relatives. 2022 , 238, 124396		2
293	Recent progress in PIM-1 based membranes for sustainable CO ₂ separations: Polymer structure manipulation and mixed matrix membrane design. 2022 , 284, 120277		8
292	Membrane-based enthalpy exchangers for coincident sensible and latent heat recovery. 2022 , 253, 115144		4
291	Fabrication of analogous mixed matrix membranes via partially in-situ generation of rigid porous moieties without interfacial defects. <i>Journal of Membrane Science</i> , 2022 , 644, 120164	9.6	1
290	Interfacial co-weaving of AO-PIM-1 and ZIF-8 in composite membranes for enhanced H ₂ purification. <i>Journal of Membrane Science</i> , 2022 , 645, 120217	9.6	
289	New sterically hindered polyvinylamine-containing membranes for CO ₂ capture from flue gas. <i>Journal of Membrane Science</i> , 2022 , 645, 120195	9.6	1
288	De novo synthesis of amino-functionalized ZIF-8 nanoparticles: Enhanced interfacial compatibility and pervaporation performance in mixed matrix membranes applying for ethanol dehydration. 2022 , 285, 120321		3

287	Synergistic effect of thermal crosslinking and thermal rearrangement on free volume and gas separation properties of 6FDA based polyimide membranes studied by positron annihilation. <i>Journal of Membrane Science</i> , 2022 , 645, 120163	9.6	3
286	The structure-property relationships of Polymers of Intrinsic Microporosity (PIMs). 2022 , 36, 100785		1
285	Ethylene and Ethane Transport Properties of Hydrogen-Stable Ag +-Based Facilitated Transport Membranes.		
284	A Rigid and Planar Aza-Based Ternary Anhydride for the Preparation of Cross-Linked Polyimide Membrane Displaying High CO/CH Separation Performance.. 2022 , 14,		1
283	Preparation of High-Strength and High-Permeability EC/PI/MOF Mixed Matrix Membrane**. 2022 , 7,		1
282	Potential and design of imine-linked two-dimensional covalent organic framework membranes for Ethane/Methane separation. 2022 , 585, 152601		0
281	Phthalide-containing poly(ether-imide)s based thermal rearrangement membranes for gas separation application.. 2021 , 12, 728-742		1
280	Effective functionalization of porous polymer fillers to enhance CO ₂ /N ₂ separation performance of mixed-matrix membranes. <i>Journal of Membrane Science</i> , 2022 , 647, 120309	9.6	2
279	Mixed matrix membranes for gas separation. 2022 , 203-254		
278	Synthesis and Characterization of Microwave-Assisted Copolymer Membranes of Poly(vinyl alcohol)-g-starch-methacrylate and Their Evaluation for Gas Transport Properties.. 2022 , 14,		1
277	Design of Polymeric Zwitterionic Solid Electrolytes with Superionic Lithium Transport.. 2022 , 8, 169-175		8
276	Analysis of Influencing Factors on the Gas Separation Performance of Carbon Molecular Sieve Membrane Using Machine Learning Technique.. 2022 , 12,		1
275	Membranes for blue energy conversion by pressure-retarded osmosis (PRO). 2022 , 17-90		
274	Membrane-based air dehumidification: A comparative review on membrane contactors, separative membranes and adsorptive membranes. 2022 , 41, 121-144		0
273	Nanostructured membranes for gas and vapor separation. 2022 , 139-201		
272	Preparation of Al ₂ O ₃ / PDA /Pebax membrane modified by (C ₃ NH ₂ MIm)(PF ₆) for improving CO ₂ separation performance. 52203		0
271	The Potential of Machine Learning for Enhancing CO ₂ Sequestration, Storage, Transportation, and Utilization-based Processes: A Brief Perspective. 2022 , 74, 414-428		3
270	Overview of nanostructured and nano-enhanced membranes. 2022 , 1-16		

269	Induced polymer crystallinity in mixed matrix membranes by metal-organic framework nanosheets for gas separation. 2022 , 2, 100017		3
268	CO2 separation from CO2-EOR associated gas using hollow fiber membranes: A process design and simulation study. 2022 , 100, 104451		0
267	Free-Standing Nanometer-Thick Covalent Organic Framework Films for Separating CO2 and N2.		1
266	Meta-analysis of electrically conductive membranes: A comparative review of their materials, applications, and performance. 2022 , 287, 120482		1
265	Isoporous membrane with glucose mediated toughness and protein sieving prepared from novel block copolymers containing boronic acid moieties. <i>Journal of Membrane Science</i> , 2022 , 647, 120285	9.6	0
264	Ethylene and ethane transport properties of hydrogen-stable Ag ⁺ -based facilitated transport membranes. <i>Journal of Membrane Science</i> , 2022 , 647, 120300	9.6	2
263	Seeking synergy in membranes: blends and mixtures with polymers of intrinsic microporosity. 2022 , 36, 100792		0
262	Small-Pore Zeolite Membranes: A Review of Gas Separation Applications and Membrane Preparation. 2022 , 9, 47		0
261	Gas Permeability, Fractional Free Volume and Molecular Kinetic Diameters: The Effect of Thermal Rearrangement on -hydroxy Polyamide Membranes Loaded with a Porous Polymer Network.. 2022 , 12,		0
260	Mixed Matrix Membranes for Efficient CO Separation Using an Engineered UiO-66 MOF in a Pebax Polymer.. 2022 , 14,		3
259	Recent Advances in Mixed-Matrix Membranes for Light Hydrocarbon (C-C) Separation.. 2022 , 12,		0
258	Ultrafast and selective gas transport through highly ordered black phosphorene nanochannels. 2022 , 288, 120629		0
257	Switchable gas permeability of a polypropylene-liquid crystalline composite film. 2022 , 60, 803-811		1
256	Symbiosis-inspired de novo synthesis of ultrahigh MOF growth mixed matrix membranes for sustainable carbon capture.. 2022 , 119,		15
255	Hydrogen Recovery by Mixed Matrix Membranes Made from 6FCl-APAF HPA with Different Contents of a Porous Polymer Network and Their Thermal Rearrangement.. 2021 , 13,		0
254	Carbon Dioxide Enrichment of PDMS/PSF Composite Membranes for Solving the Greenhouse Effect and Food Crisis.		
253	Synergistically Improved PIM-1 Membrane Gas Separation Performance by PAF-1 Incorporation and UV Irradiation.		1
252	Hierarchical Amine-Functionalized Zif-8 Mixed-Matrix Membranes with Engineered Interface and Transport Pathway for Efficient Gas Separation.		

251	Kinetics of the Formation of Methane and Carbon Dioxide Gas Hydrates in the Presence of Tetrahydrofuran and Sodium Lauryl Sulfate Promoters. 2022 , 96, 54-61	0
250	Metal-Organic Frameworks as Promising Catalysts for CO ₂ Capture and Fixation. 2022 , 207-236	0
249	Polymer-based nano-enhanced microfiltration/ultrafiltration membranes. 2022 , 81-118	
248	Research Progresses of Metal-organic Framework HKUST-1-Based Membranes in Gas Separations?. 2022 , 80, 340	0
247	Tailoring the structure of polysulfone nanocomposite membranes by incorporating iron oxide doped aluminium oxide for excellent separation performance and antifouling property.	1
246	Novel polymeric additives in the preparation and modification of polymeric membranes: A comprehensive review. 2022 ,	0
245	A review of techniques to improve performance of metal organic framework (MOF) based mixed matrix membranes for CO ₂ /CH ₄ separation. 1	1
244	Metal-Organic Frameworks (MOFs)-Based Mixed Matrix Membranes (MMMs) for Gas Separation: A Review on Advanced Materials in Harsh Environmental Applications.. 2022 , e2107536	6
243	Mixed-Matrix Ion Gel Membranes for Gas Separation.	4
242	Triethylamine Base Polyimide Hybrid Membranes by Incorporating UiO-66-NH ₂ Nanoparticles for Gas Separation. 2022 , 61, 3418-3427	0
241	Mixed-matrix gas separation membranes for sustainable future: A mini review.	1
240	Designing polymeric membranes with coordination chemistry for high-precision ion separations.. 2022 , 8, eabm9436	2
239	A New Method for Capturing CO ₂ from Effluent Gases Using a Rice-Based Product. 2022 , 15, 2287	0
238	Janus Membranes for Water Purification and Gas Separation. 2022 , 367-400	
237	Poly(ionic liquid)-Functionalized UiO-66-(OH) ₂ : Improved Interfacial Compatibility and Separation Ability in Mixed Matrix Membranes for CO ₂ Separation.	0
236	Gas Separations using Nanoporous Atomically Thin Membranes: Recent Theoretical, Simulation, and Experimental Advances.. 2022 , e2201472	3
235	Weakly pressure-dependent molecular sieving of propylene/propane mixtures through mixed matrix membrane with ZIF-8 direct-through channels. <i>Journal of Membrane Science</i> , 2022 , 648, 120366	9.6 0
234	Catalytic arene-norbornene annulation (CANAL) ladder polymer derived carbon membranes with unparalleled hydrogen/carbon dioxide size-sieving capability. <i>Journal of Membrane Science</i> , 2022 , 120548	9.6 1

233	Free volume and gas transport properties of hydrolyzed polymer of intrinsic microporosity (PIM-1) membrane studied by positron annihilation spectroscopy. 2022 , 335, 111770		
232	Gas separation membranes obtained by partial pyrolysis of polyimides exhibiting polyethylene oxide moieties. 2022 , 247, 124789		1
231	Imidazolium-Type Anion Exchange Membranes for Improved Organic Acid Transport and Permselectivity in Electrodialysis.		2
230	Fabrication of polyarylate thin-film nanocomposite membrane based on graphene quantum dots interlayer for enhanced gas separation performance. 2022 , 121035		0
229	Enhanced 2-D MOFs nanosheets/PES-g-PEG mixed matrix membrane for efficient CO ₂ separation. 2022 , 180, 79-89		1
228	Understanding Gas Transport in Polymer-Grafted Nanoparticle Assemblies.		0
227	An integrated materials approach to ultrapermeable and ultrasensitive CO polymer membranes.. 2022 , 376, 90-94		10
226	Synthetic guidelines for highly selective mixed matrix membranes. <i>Journal of Membrane Science</i> , 2022 , 649, 120311	9.6	1
225	Engineered graphene-based mixed matrix membranes to boost CO ₂ separation performance: Latest developments and future prospects. 2022 , 160, 112294		0
224	Gas Transport and Separation Properties of Polynorbornene Treated with Elemental Fluorine in a Perfluorodecalin Liquid. 2021 , 3, 351-364		0
223	Thermal-Oxidative Membranes Based on Block Hydroxyl Polyimide for H ₂ Separation. 2022 , 55, 370-381		3
222	Mixed Matrix Membranes Based on Torlon and ZIF-8 for High-Temperature, Size-Selective Gas Separations.. 2021 , 11,		0
221	Assessment of Membrane Performance for Post-Combustion CO ₂ Capture. 2022 , 61, 777-785		
220	Data-Driven Methods for Accelerating Polymer Design. 2022 , 2, 8-26		9
219	Polymer Morphological Effect on Gas Transport within Triptycene-Based Polysulfones.		2
218	Enhanced Membrane Performance for Gas Separation by Coupling Effect of the Porous Aromatic Framework (PAF) Incorporation and Photo-Oxidation.		0
217	Module Design and Membrane Materials. 2022 , 99-142		0
216	Optimization of a MOF Blended with Modified Polyimide Membrane for High-Performance Gas Separation.. 2021 , 12,		1

215	Challenges in commercialization of sustainable membranes with FNMs. 2022 , 329-353	
214	Theoretical concepts of membrane-nanomaterial composites. 2022 , 37-80	
213	Synthesis and Characterization of a Crystalline Imine-Based Covalent Organic Framework with Triazine Node and Biphenyl Linker and Its Fluorinated Derivate for CO/CH Separation.. 2022 , 15,	2
212	Elastic Forces and Molecular Transport through Polymer Matrices.	0
211	Mixed matrix membranes containing composite nanosheets with three-dimensional nanopores for efficient CO ₂ separation. 2022 , 117, 103658	3
210	Carbon dioxide enrichment of PDMS/PSF composite membranes for solving the greenhouse effect and food crisis. 2022 , 61, 102011	0
209	Architecting MOFs-based mixed matrix membrane for efficient CO ₂ separation: Ameliorating strategies toward non-ideal interface. 2022 , 443, 136290	0
208	Data_Sheet_1.PDF. 2019 ,	
207	Synthesis, microstructures, and gas separation performance of norbornyl bis-benzocyclobutene-Tröger's base polymers derived from pure regioisomers.	1
206	High-Throughput Screening of COF Membranes and COF/Polymer MMMs for Helium Separation and Hydrogen Purification.. 2022 ,	1
205	Biphenyl(isatin-co-trifluoroacetophenone)-Based Copolymers Synthesized Using the Friedel-Crafts Reaction as Mechanically Robust Membranes for Efficient CO ₂ Separation. 2022 , 4, 3779-3790	1
204	Preparation and gas separation properties of spirobisbenzoxazole-based polyimides. 2022 , 111231	0
203	Mathematical Modeling of Monovalent Permselectivity of a Bilayer Ion-Exchange Membrane as a Function of Current Density.. 2022 , 23,	0
202	Effect of Uniform Deformation on the Mechanical and Gas Transport Characteristics of Polyimides Based on Diethyltoluylenediamine. 2022 , 4, 93-100	0
201	High-performance Gas Separation Membranes Derived from Thermal-oxidative Block Poly(benzoxazole-co-imide). 2022 , 121212	0
200	The mechanism of light gas transport through configurational free volume in glassy polymers. <i>Journal of Membrane Science</i> , 2022 , 120608	9.6 0
199	Thermal rearrangement in thermal cascade reaction polymers via ortho-carbonate ester functionalization of polyimides and their gas separation performance. <i>Journal of Membrane Science</i> , 2022 , 655, 120586	9.6 0
198	A Low-Cost Porous Polymer Membrane for Gas Permeation. 2022 , 15, 3537	0

197	Enhancing the Permselectivity of Thin-Film Composite Membranes Interlayered with MoS Nanosheets via Precise Thickness Control.. 2022 ,		0
196	A new relevant membrane application: CO2 direct air capture (DAC). 2022 , 137047		4
195	SAPO-34 Zeolite and Membranes for Biogas Purification. 2022 , 181-208		
194	Carbon Nanotubes-Based Mixed Matrix Membranes in Separation Technology. 2022 , 171-221		
193	Molecular Insight into 6fd Polyimide-Branched Poly(Phenylene) Copolymers: Synthesis, Block Compatibility, Ffv, Morphology, Physical Properties, Gas Separation, and Modeled Gas Transport Study.		
192	Spirobisindane-Containing Imidazolium Polyimide Ionene: Structural Design and Gas Separation Performance of Ibmic PIMs□		0
191	Mixed Matrix Membranes Loaded with a Porous Organic Polymer Having Bipyridine Moieties. 2022 , 12, 547		1
190	CO2-Selective Mixed Matrix Membranes of Bimetallic Zn/Co-ZIF vs. ZIF-8 and ZIF-67. 2022 , 121391		1
189	High-throughput computational screening of nanoporous materials in targeted applications.		2
188	Permeability of Polymer Membranes beyond Linear Response.		1
187	Effect of Supercritical CO2 Treatment on Mechanical and Gas Transport Characteristics of Polyimides Based on Diethyl Toluene Diamine Isomers. 2022 , 4, 162-169		0
186	High free volume polymeric membranes for CO2 capture: state-of-the-art. 2022 , 15,		
185	Multi-lab study on the pure-gas permeation of commercial polysulfone (PSf) membranes: Measurement standards and best practices. <i>Journal of Membrane Science</i> , 2022 , 120746	9.6	1
184	Polymer Electrolyte Based on Cyano-Functionalized Polysiloxane with Enhanced Salt Dissolution and High Ionic Conductivity.		
183	Synthesis, characterization and properties of polyimides with spirobisbenzoxazole scaffold structure. 2022 , 254, 125091		2
182	The effect of chain rigidity and microstructure on gas separation performance of the cardo-based polyimides. 2022 , 254, 125046		0
181	Recent trends and advances in biogas upgrading and methanotrophs-based valorization. 2022 , 11, 100325		2
180	Modeling, simulation, and techno-economic optimization of argon separation processes. 2022 , 184, 165-179		0

- 179 Mixed matrix membrane development progress and prospect of using 2D nanosheet filler for CO₂ separation and capture. **2022**, 62, 102094 1
- 178 CO₂ separation by imide/imine organic cages.
- 177 Synthesis and Oxygen Permeation of Well-Defined Multistranded Copolymers from Monomers Having Two Different Polymerizable Groups. **2022**, 55, 5699-5710
- 176 Unveiling the Growth of Polyamide Nanofilms at Water/Organic Free Interfaces: Toward Enhanced Water/Salt Selectivity. **2022**, 56, 10279-10288 0
- 175 Side-Chain Length and Dispersity in ROMP Polymers with Pore-Generating Side Chains for Gas Separations. 0
- 174 Nanocellulose based membranes for CO₂ separation from biogas through the facilitated transport mechanism: A review. **2022**, 100191 0
- 173 Elucidating the Roles of Polyamide Layer Structural Properties in the Permeability/Selectivity Tradeoff Governing Aqueous Separations. 0
- 172 Separation of H₂/CH₄ gas mixture through graphenylene membrane with functionalized nanopore: A computational study. **2022**, 0
- 171 Carbonic Anhydrase Membranes For Carbon Capture and Storage. **2022**, 100031
- 170 Lattice Model of Fluid Transport in Mixed Matrix Membranes. 2200159
- 169 Synthesis and oxygen permselectivity of multi-stranded graft copolymers. **2022**, 255, 125092
- 168 Polydimethylsiloxane based membranes for biofuels pervaporation. **2022**, 298, 121612 1
- 167 CO₂/CH₄ mixed-gas separation through carbon nitride membrane: A molecular dynamics simulation. **2022**, 650, 129643 2
- 166 Mixed gas diffusion and permeation of ternary and quaternary CO₂/CO/N₂. *Journal of Membrane Science*, **2022**, 659, 120768 9.6 1
- 165 Ultra-permeable intercalated metal-induced microporous polymer nano-dots rooted smart membrane for environmental remediation. **2022**, 306, 135482 0
- 164 Combination of metal-organic frameworks (MOFs) and covalent organic frameworks (COFs): Recent advances in synthesis and analytical applications of MOF/COF composites. **2022**, 116741 4
- 163 Ultralight and Ultrathin Electrospun Membranes with Enhanced Air Permeability for Chemical and Biological Protection. **2022**, 14, 32522-32532 2
- 162 A comparative study between single gas and mixed gas permeation of polyether-block-amide type copolymer membranes. **2022**, 108324 0

- 161 A short review on hydrophobic pervaporative inorganic membranes for ethanol/water separation applications. 0
- 160 X-ray Diffraction and Molecular Simulations in the Study of Metal-Organic Frameworks for Membrane Gas Separation.
- 159 Gas permselectivity of novel polypyrrolone-silica hybrid membranes. 0
- 158 ??????????????????. 2022,
- 157 Synthesis, characterization, and gas separation properties of novel fluorinated co-polyimides with bulky side groups. 2022, 125273
- 156 Membranes for Oil/Water Separation: A Review. 2200557 1
- 155 Postsynthetic Modification of Zn/Co-ZIF by 3,5-Diamino-1,2,4-triazole for Improved MOF/Polyimide Interface in CO₂-Selective Mixed Matrix Membranes.
- 154 Synthesis and Gas Separation Properties of Aromatic Polyimides Containing Noncoplanar Rigid Sites. 2022, 4, 6265-6275 1
- 153 Hierarchical Amine-Functionalized ZIF-8 Mixed-Matrix Membranes with an Engineered Interface and Transport Pathway for Efficient Gas Separation. 2
- 152 New polyimides containing methyl benzamidobenzoate or dimethyl benzamidoisophthalate as bulky pendant groups. Effects on solubility, thermal and gas transport properties.
- 151 Preparation of Pebax 1657/MAF-7 Mixed Matrix Membranes with Enhanced CO₂/N₂ Separation by Active Site of Triazole Ligand. 2022, 12, 786 0
- 150 Novel organo-soluble poly(ether imide)s based on diethyltoluenediamine: Synthesis, characterization and gas transport properties. 2022, 125258 0
- 149 Crosslinked thermally rearranged polybenzoxazole derived from phenolphthalein-based polyimide for gas separation. 2022, 120934 0
- 148 Free Volume and Permeability of Mixed Matrix Membranes Made from a Terbutyl-M-terphenyl Polyamide and a Porous Polymer Network. 2022, 14, 3176 0
- 147 Recent advances on the modeling and optimization of CO₂ capture processes. 2022, 165, 107938
- 146 Carbon molecular sieve/ZSM-5 mixed matrix membranes with enhanced gas separation performance and the performance recovery of the aging membranes. 2022, 660, 120869 0
- 145 Development of highly permselective Mixed Matrix Membranes comprising of polyimide and Ln-MOF for CO₂ capture. 2022, 307, 136051 0
- 144 Technical analysis of CO₂ capture pathways and technologies. 2022, 10, 108470 1

- 143 Molecular insights into the CO₂ separation mechanism of GO supported deep eutectic solvent membrane. **2022**, 366, 120248 0
- 142 Polyurethane-based gas separation membranes: A review and perspectives. **2022**, 301, 122067 0
- 141 Concurrent enhancement of CO₂-philic pathway and interfacial compatibilization in ZIF-67 based polysulfone membranes through [Bmim][Tf₂N] for CO₂ separation. **2022**, 606, 154900 0
- 140 Recyclable nanocomposites for carbon dioxide fixation and membrane separation using waste polycarbonate. **2023**, 452, 139262 0
- 139 Advances in metal-organic framework-based membranes. **2022**, 51, 8300-8350 10
- 138 Membranes with Zif-8 Regulated Mxene Nanosheet Stacks for Efficient Molecular Sieving. 0
- 137 Competitive Transport of Water Vapor and Oxygen in Epoxy-Based Coatings. 0
- 136 Metal-organic frameworks as O₂-selective adsorbents for air separations. **2022**, 13, 10216-10237 0
- 135 Modelling Sorption and Transport of Gases in Polymeric Membranes across Different Scales: A Review. **2022**, 12, 857 2
- 134 The Transport Properties of Semi-Crystalline Polyetherimide BPDA-P3 in Amorphous and Ordered States: Computer Simulations. **2022**, 12, 856 1
- 133 Influence of NIPS on the structure and gas separation performance of asymmetric carbon molecular sieve membranes. **2022**, 57, 16554-16567 0
- 132 Material and Process Tests of Heterogeneous Membranes Containing ZIF-8, SiO₂ and POSS-Ph. **2022**, 15, 6455 0
- 131 Recent Advances in Membrane-Based Biogas and Biohydrogen Upgrading. **2022**, 10, 1918 0
- 130 Cellulose Triacetate-Based Mixed-Matrix Membranes with MXene 2D Filler- CO_2/CH_4 Separation Performance and Comparison with TiO₂-Based 1D and 0D Fillers. **2022**, 12, 917 0
- 129 High-performance CO₂ separation membranes: comparison of graphene oxide and carboxylated graphene oxide nanofillers. 0
- 128 Gas separation improvement of PES / PSF / PVP blend mixed matrix membranes inclusive of amorphous MOFs by O₂ plasma treatment. 0
- 127 Network-Nanostructured ZIF-8 to Enable Percolation for Enhanced Gas Transport. 2207775 0
- 126 Recent advances in polymeric membranes for carbon dioxide capture from syngas. 1-22 0

- 125 Membrane Fabrication for Carbon Dioxide Separation: A Critical Review. ○
- 124 Recent developments of anti-plasticized membranes for aggressive CO₂ separation. **2022**, ○
- 123 Thin Film Composite Membranes Based on the Polymer of Intrinsic Microporosity PIM-EA(Me₂)-TB Blended with Matrimid[®] 5218. **2022**, 12, 881 1
- 122 Gas transport performance of highly heat-resistant and organo-soluble fluorinated polyimides with bulky pendant group. **2022**, 29, ○
- 121 Metal-Induced Aminosilica Rigidity Improves Highly Permeable Microporous Membranes via Different Types of Pendant Precursors. **2022**, 14, 42692-42704 ○
- 120 Tunable Gas Permeation Behavior in Self-Standing Cellulose Nanocrystal-Based Membranes. **2022**, 10, 12895-12905 ○
- 119 Microphase-separated morphology controlled polyimide graft copolymer membranes for CO₂ gas separation. **2022**, 122315 1
- 118 Environmental remediation through various composite membranes moieties: Performances and thermomechanical properties. **2022**, 309, 136613 ○
- 117 CO₂ separation of fluorinated 6FDA-based polyimides, performance-improved ZIF-incorporated mixed matrix membranes and gas permeability model evaluations. **2022**, 10, 108611 ○
- 116 Ionic liquid enhancement of interface compatibility in mixed-linker ZIF-based mixed matrix membranes for advanced CO₂/CH₄ separation. ○
- 115 3D-printed PDMS-based membranes for CO₂ separation applications. ○
- 114 Fabrication and testing of mixed matrix membranes of UiO-66-NH₂ in cellulose acetate for CO₂ separation from model biogas. ○
- 113 Pentiptycene-Containing Polybenzoxazole Membranes with a Crosslinked Unimodal Network Structure for High-Temperature Hydrogen Separations. 1
- 112 Thermally Rearranged Mixed Matrix Membranes from Copoly(o-hydroxyamide)s and Copoly(o-hydroxyamide-amide)s with a Porous Polymer Network as a Filler: A Comparison of Their Gas Separation Performances. **2022**, 12, 998 ○
- 111 Sorption and Gas Transport Characteristics of Polyimides Based on a Mixture of Diethyl Toluene Diamine Isomers. **2022**, 4, 290-296 ○
- 110 Constructing Dual-Transport Pathways by Incorporating Beaded Nanofillers in Mixed Matrix Membranes for Efficient CO₂ Separation. **2022**, 14, 49233-49243 ○
- 109 Analysis of the Influence of Process Parameters on the Properties of Homogeneous and Heterogeneous Membranes for Gas Separation. **2022**, 12, 1016 ○
- 108 Modeling the Effect of Defects and Disorder in Amorphous Metal-Organic Frameworks. **2022**, 34, 9042-9054 ○

- 107 Atomic layer deposition modified PIM-1 membranes for improved CO₂ separation: A comparative study on the microstructure-performance relationships. **2022**, 664, 121103 0
- 106 Small-pore zeolite and zeotype membranes for CO₂ capture and sequestration [A review]. **2022**, 10, 108707 2
- 105 Development of a crossflow nanofiltration process for polishing of wastewater by-product from biogas production processes. **2022**, 50, 103197 0
- 104 Fabricating Leaf-like hierarchical ZIF-67 as Intra-Mixed matrix membrane microarchitecture for efficient intensification of CO₂ separation. **2023**, 305, 122460 0
- 103 Membranes with ZIF-8 regulated MXene nanosheet stacks for efficient molecular sieving. **2023**, 546, 116184 0
- 102 Tuning interlayer spacing of graphene oxide membrane to enhance its separation performance of hydrogen isotopic water in membrane distillation. **2023**, 304, 122382 0
- 101 A facile graphene oxide modified approach towards membrane with prominent improved permeability and antifouling performance. **2023**, 545, 116130 1
- 100 Mixed matrix membranes for H₂/CO₂ gas separation- a critical review. **2023**, 333, 126285 0
- 99 Multiblock copolymers containing polyether segments for separation of C₄ hydrocarbons. **2023**, 666, 121176 0
- 98 Role of side-chain length on gas transport of CO₂/CH₄ mixtures in polymers with side-chain porosity. **2022**, 121194 0
- 97 Non-linear high T_g polyimide-based membranes for separating CO₂/CH₄ gas mixtures. **2022**, 125520 0
- 96 Modified CARDO-Based Copolyimides with Improved Sour Mixed-Gas Permeation Properties. 0
- 95 Boosting the Performance of Nanofiltration Membranes in Removing Organic Micropollutants: Trade-Off Effect, Strategy Evaluation, and Prospective Development. **2022**, 56, 15220-15237 2
- 94 Synergistic improvement of CO₂/CH₄ separation performance of phenolphthalein-based polyimide membranes by thermal decomposition and thermal-oxidative crosslinking. **2022**, 263, 125528 0
- 93 Ultraparpermeable membranes based on connected cluster of hollow polydimethylsiloxane nanoparticles for gas separation. **2022**, 0
- 92 Tailoring 6FDA-based click cross-linked membranes: modular synthesis and tunable gas separation. 0
- 91 Process performance maps for membrane-based CO₂ separation using artificial neural networks. **2023**, 122, 103812 0
- 90 Highly soluble fluorinated polyimides with promising gas transport performance and optical transparency. 0

- 89 Challenge and promise of mixed matrix hollow fiber composite membranes for CO₂ separations. **2023**, 308, 122876 ○
- 88 Honeycomb-like Hofmann-type metal-organic framework membranes for C₂H₂/CO₂ and H₂/CO₂ separation. **2023**, 669, 121282 ○
- 87 Issues and challenges in hydrogen separation technologies. **2023**, 9, 894-911 ○
- 86 Preparation of a Poly (Ether-b-Amide) Mixed-Matrix Membrane and Its Application in Blast Furnace Gas. **2022**, 12, 1851 ○
- 85 Dibenzomethanopentacene-based polymers of intrinsic microporosity for use in gas separation membranes. ○
- 84 In Silico Screening of Metal-Organic Frameworks and Zeolites for He/N₂ Separation. **2023**, 28, 20 ○
- 83 The effect of filler loading and APTES treatment on the performance of PSf/SBA-15 mixed matrix membranes. **2022**, ○
- 82 Development of CO₂-philic Blended Membranes Using PIMBI and PIMBEG/PPG. 2200596 ○
- 81 Aromatic Polyimide Membranes with tert-Butyl and Carboxylic Side Groups for Gas Separation Applications: Covalent Crosslinking Study. **2022**, 14, 5517 ○
- 80 Ionic Liquids-Polymer of Intrinsic Microporosity (PIMs) Blend Membranes for CO₂ Separation. **2022**, 12, 1262 ○
- 79 Attapulgite Nanorod-Incorporated Polyimide Membrane for Enhanced Gas Separation Performance. **2022**, 14, 5391 1
- 78 Dibenzomethanopentacene-based polymers of intrinsic microporosity for use in gas separation membranes. ○
- 77 Highly Selective and Hydrocarbon-Resistant Polyimide Hollow Fiber Membranes for Helium Recovery from Natural Gas. ○
- 76 Machine learning for membrane design and discovery. **2022**, ○
- 75 Cellulose-based carbon membranes for gas separations - Unraveling structural parameters and surface chemistry for superior separation performance. **2022**, ○
- 74 Large-scale oxygen-enriched air (OEA) production from polymeric membranes for partial oxycombustion processes. **2023**, 126697 ○
- 73 Ionic Microporous Polymer Membranes for Advanced Gas Separations. ○
- 72 High-Loading Poly(ethylene glycol)-Blended Poly(acrylic acid) Membranes for CO₂ Separation. **2023**, 8, 2119-2127 ○

- 71 Integrated Membrane Material Design and System Synthesis. **2023**, 118406 ○
- 70 Molecular Insight into 6FD Polyimide-Branched Poly(phenylene) Copolymers: Synthesis, Block Compatibility, and Gas Transport Study. **2023**, 5, 290-301 ○
- 69 An Upper Bound Visualization of Design Trade-Offs in Adsorbent Materials for Gas Separations: CO₂, N₂, CH₄, H₂, O₂, Xe, Kr, and Ar Adsorbents. 2206437 ○
- 68 Oxygen transport through epoxy-based powder coatings in humid environments. **2023**, 175, 107295 ○
- 67 Polymer materials derived from the SEAr reaction for gas separation applications. **2023**, 267, 125647 ○
- 66 Fine tune gas separation property of intrinsic microporous polyimides and their carbon molecular sieve membranes by gradient bromine substitution/removal. **2023**, 669, 121310 ○
- 65 Mixed matrix composite membranes with MOF-protruding structure for efficient CO₂ separation. **2023**, 669, 121340 ○
- 64 Enhanced CO₂ separation performance by incorporating KAUST-8 nanosheets into crosslinked poly(ethylene oxide) membrane. **2023**, 309, 123057 ○
- 63 Mixed matrix membranes comprising 6FDA-based polyimide blends and UiO-66 with co-continuous structures for gas separations. **2023**, 310, 123126 ○
- 62 Uncertainty in Composite Membranes: From Defect Engineering to Film Processing. **2023**, 145, 830-840 ○
- 61 Recent Development in Physical, Chemical, Biological and Hybrid Biogas Upgradation Techniques. **2023**, 15, 476 1
- 60 Intrinsically Self-Healing Polymers: From Mechanistic Insight to Current Challenges. ○
- 59 Preparation and Characterization of Polyvinylalcohol/Polysulfone Composite Membranes for Enhanced CO₂/N₂ Separation. **2023**, 15, 124 ○
- 58 Recent Advances in Poly(Ionic Liquid)-Based Membranes for CO₂ Separation. **2023**, 15, 667 ○
- 57 Polymeric membranes for syngas purification. **2023**, 273-305 ○
- 56 Application of Ionic Liquids in CO₂ Capture. **2023**, 39-57 ○
- 55 Chemical Modification of Dimethylpolysiloxane for Enhancement of CO₂ Binding Enthalpy. ○
- 54 Intrinsically Microporous Polyimides from Norbornyl Bis-benzocyclobutene-Containing Diamines and Rigid Dianhydrides for Membrane-Based Gas Separation. **2023**, 5, 1420-1429 ○

- 53 Computational Investigation of Dual Filler-Incorporated Polymer Membranes for Efficient CO₂ and H₂ Separation: MOF/COF/Polymer Mixed Matrix Membranes. ○
- 52 Polymeric Composite Dense Membranes Applied for the Flue Gas Treatment. **2023**, 159-170 ○
- 51 Oxygen permeability of fully conjugated polymers consisting of (di)ethynylene and phenylene groups synthesized by Glaser or Sonogashira coupling polycondensation. ○
- 50 Facilitated Transport Membranes (FTMs) for Syngas Purification (CO₂/H₂). **2023**, 145-171 ○
- 49 Ladder Polymers of Intrinsic Microporosity (PIMs). **2023**, 179-218 ○
- 48 Efficient CO₂/CH₄ separation using [Bmim][Ac]/Pebax-1657 supported ionic liquid membranes and its prediction by density functional theory. **2023**, 124, 103856 ○
- 47 Making waves: Why do we need ultra-permeable nanofiltration membranes for water treatment?. **2023**, 19, 100172 ○
- 46 Super high gas separation performance membranes derived from a brominated alternative PIM by thermal induced crosslinking and carbonization at low temperature. **2023**, 314, 123548 ○
- 45 Interfacial synthesis: a scalable fabrication method of two-dimensional membranes. **2023**, 40, 100903 ○
- 44 Perspective and outlook into green and effective approaches for zeolitic membrane preparation. **2023**, 22, 100345 ○
- 43 Ester-crosslinked polymers of intrinsic microporosity membranes with enhanced plasticization resistance for CO₂ separation. **2023**, 314, 123623 ○
- 42 Polyamide layer modulation for PA-TFC membranes Optimization: Developments, Mechanisms, and implications. **2023**, 311, 123200 ○
- 41 Double-decker-shaped phenyl-substituted silsesquioxane (DDSQ)-based nanocomposite polyimide membranes with tunable gas permeability and good aging resistance. **2023**, 315, 123725 ○
- 40 Exploring the effect of intra-chain rigidity on mixed-gas separation performance of a Triptycene-Tröger's base ladder polymer (PIM-Trip-TB) by atomistic simulations. **2023**, 677, 121614 ○
- 39 Intrinsically microporous polyimides from p-phenylenediamine with fused cyclopentyl substituents for membrane-based gas separation. **2023**, 316, 123690 ○
- 38 Ionization of Tröger's base polymer of intrinsic microporosity for high-performance membrane-mediated helium recovery. **2023**, 672, 121425 ○
- 37 New facile process evaluation for membrane-based CO₂ capture: Apparent selectivity model. **2023**, 460, 141624 1
- 36 Readiness evaluation of SOFC-MGT hybrid systems with carbon capture for distributed combined heat and power. **2023**, 278, 116728 ○

- 35 Isopropanol accelerated crystallization of ALPO-18 membranes for CO₂/CH₄ and N₂/CH₄ separations. **2023**, 312, 123400 ○
- 34 Introduction. **2023**, 1-24 ○
- 33 Ab Initio Study of Adsorption of Polymers on Metal-Organic Framework Surfaces. **2023**, 127, 3715-3725 ○
- 32 Facilitated Transport Membranes (FTMs) for CO₂ Separation from Flue Gas (CO₂/N₂). **2023**, 173-208 ○
- 31 Design, synthesis and characterization of novel fluorinated polyimide membranes with bulky pendant for gas transport. ○
- 30 Mixed Matrix Membranes Based on ZIF-8 Nanoparticles/Poly(4-styrene sulfonate) Fillers for Enhanced CO₂ Separation. **2023**, 6, 2995-3002 ○
- 29 Polyethyleneimine-modified multi-walled carbon nanotubes mixed matrix membranes for CO₂/N₂ separation. **2023**, 11, 109537 ○
- 28 Design of a military protective suit against biological agents. **2023**, 141-176 ○
- 27 The recent advance of precisely designed membranes for sieving. **2023**, 34, 232003 ○
- 26 Realizing high performance gas filters through nano-particle deposition. **2023**, 25, 9300-9310 ○
- 25 Hybrid Fluoro-Based Polymers/Graphite Foil for H₂/Natural Gas Separation. **2023**, 16, 2105 ○
- 24 Hierarchically microporous membranes for highly energy-efficient gas separations. ○
- 23 Carbon-Based Materials for Carbon Capture and Storage. **2022**, 1-38 ○
- 22 Mixed-Matrix Membranes Containing Porous Materials for Gas Separation: From Metal-Organic Frameworks to Discrete Molecular Cages. **2023**, ○
- 21 Study of dual Filler Mixed Matrix Membranes with acid-functionalized MWCNTs and Metal-Organic Framework (UiO-66-NH₂) in Cellulose Acetate for CO₂ Separation. ○
- 20 Polydimethylsiloxane/Magnesium Oxide Nanosheet Mixed Matrix Membrane for CO₂ Separation Application. **2023**, 13, 337 ○
- 19 Investigation of cellulose acetate and ZIF-8 mixed matrix membrane for CO₂ separation from model biogas. 1-12 ○
- 18 A Review of Microporous Composite Polymeric Membrane Technology for Air-Separation. **1996**, 4, 147823919600400 ○

- 17 A new ternary mixed-matrix membrane (PEBAX/PEG/MgO) to enhance CO₂/CH₄ and CO₂/N₂ separation efficiency. ○
- 16 Applications of Polyacetylene Derivatives in Gas and Liquid Separation. **2023**, 28, 2748 ○
- 15 Effect of titanium dioxide nanoparticles on polyvinyl alcohol/polyvinyl pyrrolidone composite membranes. **2023**, 46, ○
- 14 Establishing gas transport highways in MOF-based mixed matrix membranes. **2023**, 9, ○
- 13 A Brief Overview of the Microstructural Engineering of Inorganic/Organic Composite Membranes Derived from Organic Chelating Ligands. **2023**, 13, 390 ○
- 12 Membrane Technology. 1-48 ○
- 11 Effects of Graphite Flakes on the Material and Mechanical Properties of Polystyrene Membranes. **2023**, 51, 20220409 ○
- 10 Cyclic operation of a membrane-based vacuum dehumidification system by finite selectivity of the membrane. **2023**, 37, 2087-2094 ○
- 9 Review on Multidimensional Adsorbents for CO₂ Capture from Ambient Air: Recent Advances and Future Perspectives. ○
- 8 A review of membrane material for biogas and natural gas upgrading. **2023**, 204969 ○
- 7 Polyurethane-based membranes for CO₂ separation: A comprehensive review. **2023**, 97, 101095 ○
- 6 Research progress and prospects on hydrogen separation membranes. **2023**, 7, 217-241 ○
- 5 Reinforcement of single-walled carbon nanotubes on polydimethylsiloxane membranes for CO₂, O₂, and N₂ permeability/selectivity. ○
- 4 Bio-based nonporous membranes: Evolution and benchmarking review. **2023**, ○
- 3 Polymers of intrinsic microporosity containing aryl-phthalimide moieties: synthesis, modeling, and membrane gas transport properties. **2023**, 14, 2363-2373 ○
- 2 The Effect of Complex Modifier Consisting of Star Macromolecules and Ionic Liquid on Structure and Gas Separation of Polyamide Membrane. **2023**, 13, 516 ○
- 1 Effect of monomer moieties on the aggregate structure and gas transport properties of polyimides: Insights from experiments and simulations. ○