

William J Koros

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281
papers

23,330
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82
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143
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287
ext. papers

25,734
ext. citations

7.3
avg, IF

7.39
L-index

#	Paper	IF	Citations
281	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
280	Mixed matrix membranes using carbon molecular sieves. <i>Journal of Membrane Science</i> , 2003 , 211, 311-334	9.6	589
279	Materials for next-generation molecularly selective synthetic membranes. <i>Nature Materials</i> , 2017 , 16, 289-297	27	561
278	A high-performance gas-separation membrane containing submicrometer-sized metal-organic framework crystals. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 9863-6	16.4	558
277	Separation membranes. Interfacial microfluidic processing of metal-organic framework hollow fiber membranes. <i>Science</i> , 2014 , 345, 72-5	33.3	492
276	Non-ideal effects in organic/inorganic materials for gas separation membranes. <i>Journal of Molecular Structure</i> , 2005 , 739, 87-98	3.4	481
275	Tailoring mixed matrix composite membranes for gas separations. <i>Journal of Membrane Science</i> , 1997 , 137, 145-154	9.6	470
274	Unexpected Molecular Sieving Properties of Zeolitic Imidazolate Framework-8. <i>Journal of Physical Chemistry Letters</i> , 2012 , 3, 2130-4	6.4	419
273	Factors Controlling Successful Formation of Mixed-Matrix Gas Separation Materials. <i>Industrial & Engineering Chemistry Research</i> , 2000 , 39, 2692-2696	3.9	419
272	High performance ZIF-8/6FDA-DAM mixed matrix membrane for propylene/propane separations. <i>Journal of Membrane Science</i> , 2012 , 389, 34-42	9.6	349
271	Chain Mobility, Thermal, and Mechanical Properties of Poly(ethylene furanoate) Compared to Poly(ethylene terephthalate). <i>Macromolecules</i> , 2014 , 47, 1383-1391	5.5	345
270	Mixed matrix membrane materials with glassy polymers. Part 1. <i>Polymer Engineering and Science</i> , 2002 , 42, 1420-1431	2.3	320
269	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
268	Mixed matrix formulations with MOF molecular sieving for key energy-intensive separations. <i>Nature Materials</i> , 2018 , 17, 283-289	27	298
267	Natural gas permeation in polyimide membranes. <i>Journal of Membrane Science</i> , 2004 , 228, 227-236	9.6	291
266	Hybrid membrane materials comprising organic polymers with rigid dispersed phases. <i>AICHE Journal</i> , 2004 , 50, 311-321	3.6	289
265	Challenges in forming successful mixed matrix membranes with rigid polymeric materials. <i>Journal of Applied Polymer Science</i> , 2002 , 86, 881-890	2.9	283

264	Metal organic framework mixed matrix membranes for gas separations. <i>Microporous and Mesoporous Materials</i> , 2010 , 131, 13-20	5.3	282
263	Mixed matrix hollow fiber membranes made with modified HSSZ-13 zeolite in polyetherimide polymer matrix for gas separation. <i>Journal of Membrane Science</i> , 2007 , 288, 195-207	9.6	271
262	Carbon molecular sieve gas separation membranes-I. Preparation and characterization based on polyimide precursors. <i>Carbon</i> , 1994 , 32, 1419-1425	10.4	271
261	Mixed matrix membranes using carbon molecular sieves. <i>Journal of Membrane Science</i> , 2003 , 211, 335-348	9.6	255
260	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
259	High Pressure CO ₂ /CH ₄ Separation Using Carbon Molecular Sieve Hollow Fiber Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2002 , 41, 367-380	3.9	250
258	Synthesis-Structure-Property Relationships for Hyperbranched Aminosilica CO ₂ Adsorbents. <i>Advanced Functional Materials</i> , 2009 , 19, 3821-3832	15.6	249
257	Exploring the Framework Hydrophobicity and Flexibility of ZIF-8: From Biofuel Recovery to Hydrocarbon Separations. <i>Journal of Physical Chemistry Letters</i> , 2013 , 4, 3618-3622	6.4	242
256	The Effects of Crosslinking Chemistry on CO ₂ Plasticization of Polyimide Gas Separation Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2002 , 41, 6139-6148	3.9	227
255	Formation of defect-free polyimide hollow fiber membranes for gas separations. <i>Journal of Membrane Science</i> , 2000 , 167, 79-89	9.6	208
254	Olefin/paraffin gas separations with 6FDA-based polyimide membranes. <i>Journal of Membrane Science</i> , 2000 , 170, 205-214	9.6	196
253	Investigation of porosity of carbon materials and related effects on gas separation properties. <i>Carbon</i> , 2003 , 41, 253-266	10.4	195
252	Sub-Tg Cross-Linking of a Polyimide Membrane for Enhanced CO ₂ Plasticization Resistance for Natural Gas Separation. <i>Macromolecules</i> , 2011 , 44, 6046-6056	5.5	194
251	Gas transport properties of thin polymeric membranes in the presence of silicon dioxide particles. <i>Journal of Membrane Science</i> , 1997 , 125, 143-163	9.6	193
250	Carbon Dioxide Sorption and Transport in Amorphous Poly(ethylene furanoate). <i>Macromolecules</i> , 2015 , 48, 2184-2193	5.5	188
249	Effects of Polyimide Pyrolysis Conditions on Carbon Molecular Sieve Membrane Properties. <i>Industrial & Engineering Chemistry Research</i> , 1996 , 35, 2999-3003	3.9	186
248	Oxygen sorption and transport in amorphous poly(ethylene furanoate). <i>Polymer</i> , 2014 , 55, 4748-4756	3.9	184
247	Mixed matrix membrane materials with glassy polymers. Part 2. <i>Polymer Engineering and Science</i> , 2002 , 42, 1432-1441	2.3	177

246	Phase separation, vitrification, and the manifestation of macrovoids in polymeric asymmetric membranes. <i>Journal of Membrane Science</i> , 1996 , 112, 29-39	9.6	177
245	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
244	Structures and gas separation properties of asymmetric polysulfone membranes made by dry, wet, and dry/wet phase inversion. <i>Journal of Applied Polymer Science</i> , 1991 , 43, 1491-1502	2.9	174
243	Evolving beyond the thermal age of separation processes: Membranes can lead the way. <i>AIChE Journal</i> , 2004 , 50, 2326-2334	3.6	163
242	An investigation of the effects of pyrolysis parameters on gas separation properties of carbon materials. <i>Carbon</i> , 2005 , 43, 1843-1856	10.4	163
241	Solid-State Covalent Cross-Linking of Polyimide Membranes for Carbon Dioxide Plasticization Reduction. <i>Macromolecules</i> , 2003 , 36, 1882-1888	5.5	161
240	Carbon Dioxide-Induced Plasticization of Polyimide Membranes: Pseudo-Equilibrium Relationships of Diffusion, Sorption, and Swelling. <i>Macromolecules</i> , 2003 , 36, 6433-6441	5.5	156
239	Sonication-induced Ostwald ripening of ZIF-8 nanoparticles and formation of ZIF-8/polymer composite membranes. <i>Microporous and Mesoporous Materials</i> , 2012 , 158, 292-299	5.3	153
238	Hollow Fiber Adsorbents for CO ₂ Removal from Flue Gas. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 7314-7324	3.9	153
237	Cross-Linkable Polyimide Membrane for Natural Gas Purification and Carbon Dioxide Plasticization Reduction. <i>Macromolecules</i> , 2007 , 40, 583-587	5.5	152
236	Effect of pyrolysis atmosphere on separation performance of carbon molecular sieve membranes. <i>Journal of Membrane Science</i> , 2010 , 359, 2-10	9.6	146
235	Adsorption of water and ethanol in MFI-type zeolites. <i>Langmuir</i> , 2012 , 28, 8664-73	4	140
234	CO ₂ /H ₄ permeation in high zeolite 4A loading mixed matrix membranes. <i>Journal of Membrane Science</i> , 2011 , 367, 197-203	9.6	140
233	Carbon molecular sieve membranes derived from Matrimid polyimide for nitrogen/methane separation. <i>Carbon</i> , 2014 , 66, 511-522	10.4	135
232	Defect-free asymmetric hollow fiber membranes from Torlon, a polyamide-imide polymer, for high-pressure CO ₂ separations. <i>Journal of Membrane Science</i> , 2008 , 320, 65-72	9.6	129
231	Investigating the Intrinsic Ethanol/Water Separation Capability of ZIF-8: An Adsorption and Diffusion Study. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 7214-7225	3.8	127
230	Solubilization of Aromatic Solutes in Block Copolymers. <i>Macromolecules</i> , 1995 , 28, 4883-4892	5.5	124
229	Decarboxylation-Induced Cross-Linking of a Polyimide for Enhanced CO ₂ Plasticization Resistance. <i>Macromolecules</i> , 2008 , 41, 7920-7927	5.5	123

228	Natural gas upgrading using a fluorinated MOF with tuned H ₂ S and CO ₂ adsorption selectivity. <i>Nature Energy</i> , 2018 , 3, 1059-1066	62.3	123
227	Membrane-based ethylene/ethane separation: The upper bound and beyond. <i>AIChE Journal</i> , 2013 , 59, 3475-3489	3.6	122
226	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
225	Carbon molecular sieve structure development and membrane performance relationships. <i>Carbon</i> , 2017 , 115, 237-248	10.4	119
224	Water and beyond: Expanding the spectrum of large-scale energy efficient separation processes. <i>AIChE Journal</i> , 2012 , 58, 2624-2633	3.6	116
223	Aminosilane-grafted polymer/silica hollow fiber adsorbents for CO ₂ capture from flue gas. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 3921-31	9.5	115
222	Carbon molecular sieve dense film membranes derived from Matrimid [®] for ethylene/ethane separation. <i>Carbon</i> , 2012 , 50, 1488-1502	10.4	112
221	Water sorption in poly(ethylene furanoate) compared to poly(ethylene terephthalate). Part 2: Kinetic sorption. <i>Polymer</i> , 2014 , 55, 6870-6882	3.9	111
220	A qualitative skin layer formation mechanism for membranes made by dry/wet phase inversion. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1993 , 31, 419-427	2.6	111
219	Enabling Fluorinated MOF-Based Membranes for Simultaneous Removal of H ₂ S and CO from Natural Gas. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 14811-14816	16.4	111
218	Gas separation performance of 6FDA-based polyimides with different chemical structures. <i>Polymer</i> , 2013 , 54, 6226-6235	3.9	110
217	Highly scalable ZIF-based mixed-matrix hollow fiber membranes for advanced hydrocarbon separations. <i>AIChE Journal</i> , 2014 , 60, 2625-2635	3.6	108
216	Effect of condensable impurity in CO ₂ /CH ₄ gas feeds on performance of mixed matrix membranes using carbon molecular sieves. <i>Journal of Membrane Science</i> , 2003 , 221, 233-239	9.6	106
215	A General Strategy for Adhesion Enhancement in Polymeric Composites by Formation of Nanostructured Particle Surfaces. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 652-657	3.8	105
214	A guide to establishing hollow fiber macroscopic properties for membrane applications. <i>Journal of Membrane Science</i> , 1997 , 124, 223-232	9.6	104
213	Carboxylic acid containing polyimides for pervaporation separations of toluene/iso-octane mixtures. <i>Journal of Membrane Science</i> , 2003 , 219, 89-102	9.6	103
212	Zeolitic Imidazolate Framework-Enabled Membranes: Challenges and Opportunities. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 3841-9	6.4	101
211	Facile high-yield solvothermal deposition of inorganic nanostructures on zeolite crystals for mixed matrix membrane fabrication. <i>Journal of the American Chemical Society</i> , 2009 , 131, 14662-3	16.4	101

210	Effect of structure on the temperature dependence of gas transport and sorption in a series of polycarbonates. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1994 , 32, 701-713	2.6	98
209	Dense film polyimide membranes for aggressive sour gas feed separations. <i>Journal of Membrane Science</i> , 2013 , 428, 608-619	9.6	97
208	Simplified analysis of gas/polymer selective solubility behavior. <i>Journal of Polymer Science, Polymer Physics Edition</i> , 1985 , 23, 1611-1628		97
207	Hollow silicalite-1 sphere-polymer mixed matrix membranes for gas separation. <i>Separation and Purification Technology</i> , 2011 , 77, 137-145	8.3	89
206	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
205	Effect of polymer precursors on carbon molecular sieve structure and separation performance properties. <i>Carbon</i> , 2010 , 48, 4432-4441	10.4	87
204	Characterization of Ultramicroporous Carbon Membranes with Humidified Feeds. <i>Industrial & Engineering Chemistry Research</i> , 1995 , 34, 158-163	3.9	86
203	Enabling Low-Cost CO ₂ Capture via Heat Integration. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 7550-7562	3.9	85
202	Carbon molecular sieve membrane structure-property relationships for four novel 6FDA based polyimide precursors. <i>Journal of Membrane Science</i> , 2015 , 487, 60-73	9.6	84
201	Conformation-Controlled Molecular Sieving Effects for Membrane-Based Propylene/Propane Separation. <i>Advanced Materials</i> , 2019 , 31, e1807513	24	83
200	Ultrasensitive Carbon Molecular Sieve Membranes with Tailored Synergistic Sorption Selective Properties. <i>Advanced Materials</i> , 2017 , 29, 1701631	24	83
199	Mixed-linker zeolitic imidazolate framework mixed-matrix membranes for aggressive CO ₂ separation from natural gas. <i>Microporous and Mesoporous Materials</i> , 2014 , 192, 43-51	5.3	82
198	Polypyrrolones for membrane gas separations. I. Structural comparison of gas transport and sorption properties. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1999 , 37, 1235-1249	2.6	82
197	Temperature dependence of gas sorption and transport properties in polymers: measurement and applications. <i>Industrial & Engineering Chemistry Research</i> , 1992 , 31, 2708-2714	3.9	81
196	Performance of 6FDA/6FDA polyimide for propylene/propane separations. <i>Journal of Membrane Science</i> , 2010 , 365, 399-408	9.6	80
195	A High-Performance Gas-Separation Membrane Containing Submicrometer-Sized Metal-Organic Framework Crystals. <i>Angewandte Chemie</i> , 2010 , 122, 10059-10062	3.6	79
194	Gas sorption in polymers, molecular sieves, and mixed matrix membranes. <i>Journal of Applied Polymer Science</i> , 2007 , 104, 4053-4059	2.9	79
193	Physical aging in carbon molecular sieve membranes. <i>Carbon</i> , 2014 , 80, 155-166	10.4	78

192	Polymer Membranes for Hydrogen Separations. <i>MRS Bulletin</i> , 2006 , 31, 745-749	3.2	78
191	Modified Mesoporous Silica Gas Separation Membranes on Polymeric Hollow Fibers. <i>Chemistry of Materials</i> , 2011 , 23, 3025-3028	9.6	75
190	Gas separation performance of carbon molecular sieve membranes based on 6FDA-mPDA/DABA (3:2) polyimide. <i>ChemSusChem</i> , 2014 , 7, 1186-94	8.3	74
189	Silane Modification of Cellulose Acetate Dense Films as Materials for Acid Gas Removal. <i>Macromolecules</i> , 2013 , 46, 5584-5594	5.5	74
188	Relaxation Dynamics of CO ₂ Diffusion, Sorption, and Polymer Swelling for Plasticized Polyimide Membranes. <i>Macromolecules</i> , 2003 , 36, 6442-6448	5.5	74
187	Water sorption in poly(ethylene furanoate) compared to poly(ethylene terephthalate). Part 1: Equilibrium sorption. <i>Polymer</i> , 2014 , 55, 6861-6869	3.9	73
186	Nanoporous layered silicate AMH-3/cellulose acetate nanocomposite membranes for gas separations. <i>Journal of Membrane Science</i> , 2013 , 441, 129-136	9.6	72
185	Post-spinning infusion of poly(ethyleneimine) into polymer/silica hollow fiber sorbents for carbon dioxide capture. <i>Chemical Engineering Journal</i> , 2013 , 221, 166-175	14.7	71
184	Carbon molecular sieve gas separation membranes-II. Regeneration following organic exposure. <i>Carbon</i> , 1994 , 32, 1427-1432	10.4	70
183	A high-performance hydroxyl-functionalized polymer of intrinsic microporosity for an environmentally attractive membrane-based approach to decontamination of sour natural gas. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 22794-22806	13	68
182	Effect of thermal annealing on a novel polyamide-imide polymer membrane for aggressive acid gas separations. <i>Journal of Membrane Science</i> , 2012 , 401-402, 163-174	9.6	68
181	Enhanced CO/CH ₄ Separation Performance of a Mixed Matrix Membrane Based on Tailored MOF-Polymer Formulations. <i>Advanced Science</i> , 2018 , 5, 1800982	13.6	67
180	Advanced Gas Separation Membrane Materials: Rigid Aromatic Polyimides. <i>Separation Science and Technology</i> , 1988 , 23, 1611-1626	2.5	67
179	Structure-Property Relationships for Poly(pyrrolone-imide) Gas Separation Membranes. <i>Macromolecules</i> , 2003 , 36, 2374-2381	5.5	66
178	Relationship between substructure resistance and gas separation properties of defect-free integrally skinned asymmetric membranes. <i>Industrial & Engineering Chemistry Research</i> , 1991 , 30, 1837-1840	3.9	66
177	Gas separation membranes: needs for combined materials science and processing approaches. <i>Macromolecular Symposia</i> , 2002 , 188, 13-22	0.8	65
176	Transport characterization of a polypyrrolone for gas separations. <i>Journal of Membrane Science</i> , 1991 , 55, 99-117	9.6	63
175	Carbon Composite Membranes: A Solution to Adverse Humidity Effects. <i>Industrial & Engineering Chemistry Research</i> , 1995 , 34, 164-167	3.9	62

174	Temperature dependence of gas transport and sorption in carbon molecular sieve membranes derived from four 6FDA based polyimides: Entropic selectivity evaluation. <i>Carbon</i> , 2015 , 95, 995-1006	10.4	61
173	Efficient development of effective hollow fiber membranes for gas separations from novel polymers. <i>Journal of Membrane Science</i> , 2006 , 278, 92-104	9.6	61
172	Cross-Linkable Polyimide Membranes for Improved Plasticization Resistance and Permselectivity in Sour Gas Separations. <i>Macromolecules</i> , 2013 , 46, 6908-6921	5.5	60
171	Engineering substructure morphology of asymmetric carbon molecular sieve hollow fiber membranes. <i>Carbon</i> , 2014 , 76, 417-434	10.4	60
170	Study of thermal annealing on Matrimid [®] fiber performance in pervaporation of acetic acid and water mixtures. <i>Polymer</i> , 2006 , 47, 280-288	3.9	60
169	Temperature effects on gas permselection properties in hexafluoro aromatic polyimides. <i>Journal of Membrane Science</i> , 1989 , 46, 43-56	9.6	60
168	New insights into structural evolution in carbon molecular sieve membranes during pyrolysis. <i>Carbon</i> , 2019 , 141, 238-246	10.4	60
167	Effects of CO ₂ on a High Performance Hollow-Fiber Membrane for Natural Gas Purification. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 4887-4896	3.9	59
166	Effects of pyrolysis conditions on gas separation properties of 6FDA/DETDA:DABA(3:2) derived carbon molecular sieve membranes. <i>Journal of Membrane Science</i> , 2016 , 520, 699-711	9.6	58
165	Evaluation of CO ₂ adsorption dynamics of polymer/silica supported poly(ethylenimine) hollow fiber sorbents in rapid temperature swing adsorption. <i>International Journal of Greenhouse Gas Control</i> , 2014 , 21, 61-71	4.2	58
164	Porous layered oxide/Nafion [®] nanocomposite membranes for direct methanol fuel cell applications. <i>Microporous and Mesoporous Materials</i> , 2009 , 118, 427-434	5.3	58
163	Ultrasensitive glassy polymer membranes with unprecedented performance for energy-efficient sour gas separation. <i>Science Advances</i> , 2019 , 5, eaaw5459	14.3	57
162	Influence of quench medium on the structures and gas permeation properties of polysulfone membranes made by wet and dry/wet phase inversion. <i>Journal of Membrane Science</i> , 1992 , 71, 81-96	9.6	57
161	Analysis of feed stream acid gas concentration effects on the transport properties and separation performance of polymeric membranes for natural gas sweetening: A comparison between a glassy and rubbery polymer. <i>Journal of Membrane Science</i> , 2014 , 465, 107-116	9.6	56
160	Characterization of low permeability gas separation membranes and barrier materials; design and operation considerations. <i>Journal of Membrane Science</i> , 2004 , 245, 227-231	9.6	56
159	Removal of the Fermentation Inhibitor, Furfural, Using Activated Carbon in Cellulosic-Ethanol Production. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 14055-14060	3.9	55
158	Solubilization Isotherms of Aromatic Solutes in Surfactant Aggregates. <i>Journal of Colloid and Interface Science</i> , 1995 , 170, 57-64	9.3	53
157	A high-flux polyimide hollow fiber membrane to minimize footprint and energy penalty for CO ₂ recovery from flue gas. <i>Journal of Membrane Science</i> , 2012 , 423-424, 302-313	9.6	52

156	Next generation membranes Using tailored carbon. <i>Carbon</i> , 2018 , 127, 688-698	10.4	52
155	Dynamic CO ₂ adsorption performance of internally cooled silica-supported poly(ethylenimine) hollow fiber sorbents. <i>AIChE Journal</i> , 2014 , 60, 3878-3887	3.6	50
154	Butane isomer transport properties of 6FDA/DAM and MF16FDA/DAM mixed matrix membranes. <i>Journal of Membrane Science</i> , 2009 , 343, 157-163	9.6	50
153	Increased Molecular Weight of a Cross-Linkable Polyimide for Spinning Plasticization Resistant Hollow Fiber Membranes. <i>Macromolecules</i> , 2008 , 41, 6367-6375	5.5	50
152	Effect of Condensable Impurities in CO ₂ /CH ₄ Gas Feeds on Carbon Molecular Sieve Hollow-Fiber Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2003 , 42, 1064-1075	3.9	50
151	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
150	Gas permeation and selectivity of poly(organophosphazene) membranes. <i>Macromolecules</i> , 1993 , 26, 1493-1502	5.5	49
149	Antiplasticization-based enhancement of poly(ethylene terephthalate) barrier properties. <i>Polymer</i> , 2012 , 53, 213-222	3.9	48
148	Hollow fiber adsorbents for CO ₂ capture: Kinetic sorption performance. <i>Chemical Engineering Journal</i> , 2011 , 171, 801-810	14.7	48
147	Composite polymer/oxide hollow fiber contactors: versatile and scalable flow reactors for heterogeneous catalytic reactions in organic synthesis. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 6470-4	16.4	47
146	High-performance ester-crosslinked hollow fiber membranes for natural gas separations. <i>Journal of Membrane Science</i> , 2013 , 428, 251-259	9.6	47
145	Mixed matrix membranes based on 6FDA polyimide with silica and zeolite microsphere dispersed phases. <i>AIChE Journal</i> , 2015 , 61, 4481-4490	3.6	47
144	Plasticization-resistant hollow fiber membranes for CO ₂ /CH ₄ separation based on a thermally crosslinkable polyimide. <i>Journal of Membrane Science</i> , 2011 , 382, 212-221	9.6	46
143	Poly(amide-imide)/silica supported PEI hollow fiber sorbents for postcombustion CO ₂ capture by RTSA. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 19336-46	9.5	45
142	Structure-performance characterization for carbon molecular sieve membranes using molecular scale gas probes. <i>Carbon</i> , 2015 , 85, 429-442	10.4	45
141	Crosslinkable mixed matrix membranes with surface modified molecular sieves for natural gas purification: I. Preparation and experimental results. <i>Journal of Membrane Science</i> , 2011 , 377, 75-81	9.6	45
140	Zeolite-like MOF nanocrystals incorporated 6FDA-polyimide mixed-matrix membranes for CO ₂ /CH ₄ separation. <i>Journal of Membrane Science</i> , 2018 , 565, 186-193	9.6	44
139	Chemically cross-linkable polyimide membranes for improved transport plasticization resistance for natural gas separation. <i>Polymer</i> , 2015 , 58, 121-129	3.9	44

138	Effect of permeate pressure on the mixed gas permeation of carbon dioxide and methane in a glassy polyimide. <i>Journal of Membrane Science</i> , 1999 , 152, 29-40	9.6	44
137	Aging of thin polyimide-ceramic and polycarbonate-ceramic composite membranes. <i>Industrial & Engineering Chemistry Research</i> , 1993 , 32, 1921-1926	3.9	44
136	Dehydration of ethanol/water mixtures using asymmetric hollow fiber membranes from commercial polyimides. <i>Journal of Membrane Science</i> , 2009 , 327, 96-103	9.6	43
135	Solvothermal deposition and characterization of magnesium hydroxide nanostructures on zeolite crystals. <i>Microporous and Mesoporous Materials</i> , 2011 , 139, 120-129	5.3	43
134	Macrovoids in Hybrid Organic/Inorganic Hollow Fiber Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 2372-2379	3.9	42
133	Polypyrrolones for membrane gas separations. II. Activation energies and heats of sorption. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1999 , 37, 1251-1265	2.6	42
132	Gas-Transport-Property Performance of Hybrid Carbon Molecular Sieve/Polymer Materials. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 9310-9321	3.9	41
131	CO ₂ sorption and desorption performance of thermally cycled hollow fiber sorbents. <i>International Journal of Greenhouse Gas Control</i> , 2012 , 10, 285-294	4.2	40
130	Antiplasticization and plasticization of Matrimid [®] asymmetric hollow fiber membranes Part A. Experimental. <i>Journal of Membrane Science</i> , 2010 , 350, 232-241	9.6	39
129	Comparison of gas transport and sorption in the ladder polymer BBL and some semi-ladder polymers. <i>Polymer</i> , 1999 , 40, 5655-5664	3.9	39
128	Hybrid Polymer/UiO-66(Zr) and Polymer/NaY Fiber Sorbents for Mercaptan Removal from Natural Gas. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 9700-9	9.5	39
127	Polyethyleneimine-functionalized polyamide imide (Torlon) hollow-fiber sorbents for post-combustion CO ₂ capture. <i>ChemSusChem</i> , 2013 , 6, 1216-23	8.3	37
126	Carbon molecular sieve membrane performance tuning by dual temperature secondary oxygen doping (DTSOD). <i>Journal of Membrane Science</i> , 2013 , 427, 472-478	9.6	37
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