

William J Koros

List of Publications by Year in descending order

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times ranked

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#	ARTICLE	IF	CITATIONS
1	Materials for next-generation molecularly selective synthetic membranes. <i>Nature Materials</i> , 2017, 16, 289-297.	13.3	831
2	Pushing the limits on possibilities for large scale gas separation: which strategies?. <i>Journal of Membrane Science</i> , 2000, 175, 181-196.	4.1	756
3	Mixed matrix membranes using carbon molecular sieves. <i>Journal of Membrane Science</i> , 2003, 211, 311-334.	4.1	661
4	A High-Performance Gas Separation Membrane Containing Submicrometer-Sized Metal-Organic Framework Crystals. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 9863-9866.	7.2	603
5	Interfacial microfluidic processing of metal-organic framework hollow fiber membranes. <i>Science</i> , 2014, 345, 72-75.	6.0	602
6	Non-ideal effects in organic-inorganic materials for gas separation membranes. <i>Journal of Molecular Structure</i> , 2005, 739, 87-98.	1.8	556
7	Tailoring mixed matrix composite membranes for gas separations. <i>Journal of Membrane Science</i> , 1997, 137, 145-154.	4.1	531
8	Unexpected Molecular Sieving Properties of Zeolitic Imidazolate Framework-8. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 2130-2134.	2.1	530
9	Factors Controlling Successful Formation of Mixed-Matrix Gas Separation Materials. <i>Industrial & Engineering Chemistry Research</i> , 2000, 39, 2692-2696.	1.8	474
10	Chain Mobility, Thermal, and Mechanical Properties of Poly(ethylene furanoate) Compared to Poly(ethylene terephthalate). <i>Macromolecules</i> , 2014, 47, 1383-1391.	2.2	473
11	Mixed matrix formulations with MOF molecular sieving for key energy-intensive separations. <i>Nature Materials</i> , 2018, 17, 283-289.	13.3	449
12	High performance ZIF-8/6FDA-DAM mixed matrix membrane for propylene/propane separations. <i>Journal of Membrane Science</i> , 2012, 389, 34-42.	4.1	418
13	Mixed matrix membrane materials with glassy polymers. Part 1. <i>Polymer Engineering and Science</i> , 2002, 42, 1420-1431.	1.5	353
14	Improvement of CO ₂ /CH ₄ separation characteristics of polyimides by chemical crosslinking. <i>Journal of Membrane Science</i> , 1999, 155, 145-154.	4.1	349
15	Natural gas permeation in polyimide membranes. <i>Journal of Membrane Science</i> , 2004, 228, 227-236.	4.1	335
16	Challenges in forming successful mixed matrix membranes with rigid polymeric materials. <i>Journal of Applied Polymer Science</i> , 2002, 86, 881-890.	1.3	328
17	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.	4.1	324
18	Carbon molecular sieve gas separation membranes-I. Preparation and characterization based on polyimide precursors. <i>Carbon</i> , 1994, 32, 1419-1425.	5.4	312

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19	Hybrid membrane materials comprising organic polymers with rigid dispersed phases. <i>AIChE Journal</i> , 2004, 50, 311-321.	1.8	312
20	Metal organic framework mixed matrix membranes for gas separations. <i>Microporous and Mesoporous Materials</i> , 2010, 131, 13-20.	2.2	305
21	Mixed matrix membranes using carbon molecular sieves. <i>Journal of Membrane Science</i> , 2003, 211, 335-348.	4.1	303
22	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.	4.1	298
23	High Pressure CO ₂ /CH ₄ Separation Using Carbon Molecular Sieve Hollow Fiber Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 367-380.	1.8	293
24	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.	2.1	277
25	The Effects of Crosslinking Chemistry on CO ₂ Plasticization of Polyimide Gas Separation Membranes. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 6139-6148.	1.8	263
26	Synthesis of Structure-Property Relationships for Hyperbranched Aminosilica CO ₂ Adsorbents. <i>Advanced Functional Materials</i> , 2009, 19, 3821-3832.	7.8	263
27	Carbon Dioxide Sorption and Transport in Amorphous Poly(ethylene furanoate). <i>Macromolecules</i> , 2015, 48, 2184-2193.	2.2	251
28	Formation of defect-free polyimide hollow fiber membranes for gas separations. <i>Journal of Membrane Science</i> , 2000, 167, 79-89.	4.1	242
29	Oxygen sorption and transport in amorphous poly(ethylene furanoate). <i>Polymer</i> , 2014, 55, 4748-4756.	1.8	242
30	Sub- <i>T_g</i> Cross-Linking of a Polyimide Membrane for Enhanced CO ₂ Plasticization Resistance for Natural Gas Separation. <i>Macromolecules</i> , 2011, 44, 6046-6056.	2.2	239
31	Olefin/paraffin gas separations with 6FDA-based polyimide membranes. <i>Journal of Membrane Science</i> , 2000, 170, 205-214.	4.1	229
32	Investigation of porosity of carbon materials and related effects on gas separation properties. <i>Carbon</i> , 2003, 41, 253-266.	5.4	229
33	Effects of Polyimide Pyrolysis Conditions on Carbon Molecular Sieve Membrane Properties. <i>Industrial & Engineering Chemistry Research</i> , 1996, 35, 2999-3003.	1.8	218
34	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.	19.8	214
35	Gas transport properties of thin polymeric membranes in the presence of silicon dioxide particles. <i>Journal of Membrane Science</i> , 1997, 125, 143-163.	4.1	213
36	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.	1.3	202

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37	Phase separation, vitrification, and the manifestation of macrovoids in polymeric asymmetric membranes. <i>Journal of Membrane Science</i> , 1996, 112, 29-39.	4.1	198
38	An investigation of the effects of pyrolysis parameters on gas separation properties of carbon materials. <i>Carbon</i> , 2005, 43, 1843-1856.	5.4	196
39	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.	4.1	193
40	Mixed matrix membrane materials with glassy polymers. Part 2. <i>Polymer Engineering and Science</i> , 2002, 42, 1432-1441.	1.5	192
41	Carbon molecular sieve structure development and membrane performance relationships. <i>Carbon</i> , 2017, 115, 237-248.	5.4	190
42	Evolving beyond the thermal age of separation processes: Membranes can lead the way. <i>AIChE Journal</i> , 2004, 50, 2326-2334.	1.8	187
43	Carbon Dioxide-Induced Plasticization of Polyimide Membranes: Pseudo-Equilibrium Relationships of Diffusion, Sorption, and Swelling. <i>Macromolecules</i> , 2003, 36, 6433-6441.	2.2	180
44	Carbon molecular sieve membranes derived from Matrimid® polyimide for nitrogen/methane separation. <i>Carbon</i> , 2014, 66, 511-522.	5.4	180
45	Solid-State Covalent Cross-Linking of Polyimide Membranes for Carbon Dioxide Plasticization Reduction. <i>Macromolecules</i> , 2003, 36, 1882-1888.	2.2	178
46	Enabling Fluorinated MOF-Based Membranes for Simultaneous Removal of H ₂ S and CO ₂ from Natural Gas. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 14811-14816.	7.2	176
47	Hollow Fiber Adsorbents for CO ₂ Removal from Flue Gas. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 7314-7324.	1.8	172
48	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.	2.2	171
49	Effect of pyrolysis atmosphere on separation performance of carbon molecular sieve membranes. <i>Journal of Membrane Science</i> , 2010, 359, 2-10.	4.1	169
50	Cross-Linkable Polyimide Membrane for Natural Gas Purification and Carbon Dioxide Plasticization Reduction. <i>Macromolecules</i> , 2007, 40, 583-587.	2.2	168
51	Adsorption of Water and Ethanol in MFI-Type Zeolites. <i>Langmuir</i> , 2012, 28, 8664-8673.	1.6	161
52	CO ₂ /CH ₄ permeation in high zeolite 4A loading mixed matrix membranes. <i>Journal of Membrane Science</i> , 2011, 367, 197-203.	4.1	157
53	Membrane-based ethylene/ethane separation: The upper bound and beyond. <i>AIChE Journal</i> , 2013, 59, 3475-3489.	1.8	156
54	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.	1.5	153

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55	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.	4.1	151
56	Decarboxylation-Induced Cross-Linking of a Polyimide for Enhanced CO ₂ Plasticization Resistance. <i>Macromolecules</i> , 2008, 41, 7920-7927.	2.2	151
57	Water and beyond: Expanding the spectrum of large-scale energy efficient separation processes. <i>AIChE Journal</i> , 2012, 58, 2624-2633.	1.8	151
58	Gas separation performance of 6FDA-based polyimides with different chemical structures. <i>Polymer</i> , 2013, 54, 6226-6235.	1.8	148
59	Water sorption in poly(ethylene furanoate) compared to poly(ethylene terephthalate). Part 2: Kinetic sorption. <i>Polymer</i> , 2014, 55, 6870-6882.	1.8	144
60	Matrimid [®] derived carbon molecular sieve hollow fiber membranes for ethylene/ethane separation. <i>Journal of Membrane Science</i> , 2011, 380, 138-147.	4.1	140
61	Carbon molecular sieve dense film membranes derived from Matrimid [®] for ethylene/ethane separation. <i>Carbon</i> , 2012, 50, 1488-1502.	5.4	139
62	Solubilization of Aromatic Solutes in Block Copolymers. <i>Macromolecules</i> , 1995, 28, 4883-4892.	2.2	135
63	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.	2.4	133
64	Highly scalable ZIF-based mixed matrix hollow fiber membranes for advanced hydrocarbon separations. <i>AIChE Journal</i> , 2014, 60, 2625-2635.	1.8	132
65	Simplified analysis of gas/polymer selective solubility behavior. <i>Journal of Polymer Science, Polymer Physics Edition</i> , 1985, 23, 1611-1628.	1.0	131
66	Ultrasensitive Carbon Molecular Sieve Membranes with Tailored Synergistic Sorption Selective Properties. <i>Advanced Materials</i> , 2017, 29, 1701631.	11.1	129
67	Aminosilane-Grafted Polymer/Silica Hollow Fiber Adsorbents for CO ₂ Capture from Flue Gas. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 3921-3931.	4.0	127
68	Carbon molecular sieve membrane structure-property relationships for four novel 6FDA based polyimide precursors. <i>Journal of Membrane Science</i> , 2015, 487, 60-73.	4.1	122
69	Characterization of Ultramicroporous Carbon Membranes with Humidified Feeds. <i>Industrial & Engineering Chemistry Research</i> , 1995, 34, 158-163.	1.8	121
70	A guide to establishing hollow fiber macroscopic properties for membrane applications. <i>Journal of Membrane Science</i> , 1997, 124, 223-232.	4.1	120
71	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.	4.1	120
72	Effect of polymer precursors on carbon molecular sieve structure and separation performance properties. <i>Carbon</i> , 2010, 48, 4432-4441.	5.4	117

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73	Conformation-controlled Molecular Sieving Effects for Membrane-based Propylene/Propane Separation. <i>Advanced Materials</i> , 2019, 31, e1807513.	11.1	117
74	Dense film polyimide membranes for aggressive sour gas feed separations. <i>Journal of Membrane Science</i> , 2013, 428, 608-619.	4.1	116
75	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, 14662-14663.	6.6	115
76	Zeolitic Imidazolate Framework-Enabled Membranes: Challenges and Opportunities. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 3841-3849.	2.1	115
77	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.	1.5	113
78	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.	4.1	112
79	Carboxylic acid containing polyimides for pervaporation separations of toluene/iso-octane mixtures. <i>Journal of Membrane Science</i> , 2003, 219, 89-102.	4.1	111
80	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.	2.4	110
81	New insights into structural evolution in carbon molecular sieve membranes during pyrolysis. <i>Carbon</i> , 2019, 141, 238-246.	5.4	109
82	Ultrasensitive glassy polymer membranes with unprecedented performance for energy-efficient sour gas separation. <i>Science Advances</i> , 2019, 5, eaaw5459.	4.7	106
83	Hollow silicalite-1 sphere-polymer mixed matrix membranes for gas separation. <i>Separation and Purification Technology</i> , 2011, 77, 137-145.	3.9	104
84	Physical aging in carbon molecular sieve membranes. <i>Carbon</i> , 2014, 80, 155-166.	5.4	104
85	Carbon molecular sieve gas separation membranes-II. Regeneration following organic exposure. <i>Carbon</i> , 1994, 32, 1427-1432.	5.4	100
86	Temperature dependence of gas sorption and transport properties in polymers: measurement and applications. <i>Industrial & Engineering Chemistry Research</i> , 1992, 31, 2708-2714.	1.8	99
87	Enabling Low-Cost CO ₂ Capture via Heat Integration. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 7550-7562.	1.8	96
88	Silane Modification of Cellulose Acetate Dense Films as Materials for Acid Gas Removal. <i>Macromolecules</i> , 2013, 46, 5584-5594.	2.2	96
89	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.	2.4	95
90	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.	2.2	95

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91	Gas Separation Performance of Carbon Molecular Sieve Membranes Based on 6FDA/MPDA/DABA (3:2) Polyimide. ChemSusChem, 2014, 7, 1186-1194.	3.6	95
92	Carbon Composite Membranes: A Solution to Adverse Humidity Effects. Industrial & Engineering Chemistry Research, 1995, 34, 164-167.	1.8	94
93	Effects of pyrolysis conditions on gas separation properties of 6FDA/DETDA:DABA(3:2) derived carbon molecular sieve membranes. Journal of Membrane Science, 2016, 520, 699-711.	4.1	94
94	Modified Mesoporous Silica Gas Separation Membranes on Polymeric Hollow Fibers. Chemistry of Materials, 2011, 23, 3025-3028.	3.2	92
95	Next generation membranes "using tailored carbon. Carbon, 2018, 127, 688-698.	5.4	92
96	Polymer Membranes for Hydrogen Separations. MRS Bulletin, 2006, 31, 745-749.	1.7	91
97	Water sorption in poly(ethylene furanoate) compared to poly(ethylene terephthalate). Part 1: Equilibrium sorption. Polymer, 2014, 55, 6861-6869.	1.8	91
98	Performance of 6FDA/6FpDA polyimide for propylene/propane separations. Journal of Membrane Science, 2010, 365, 399-408.	4.1	90
99	Advanced Gas Separation Membrane Materials: Rigid Aromatic Polyimides. Separation Science and Technology, 1988, 23, 1611-1626.	1.3	89
100	Enhanced CO ₂ /CH ₄ Separation Performance of a Mixed Matrix Membrane Based on Tailored MOF/Polymer Formulations. Advanced Science, 2018, 5, 1800982.	5.6	88
101	Gas sorption in polymers, molecular sieves, and mixed matrix membranes. Journal of Applied Polymer Science, 2007, 104, 4053-4059.	1.3	87
102	Nanoporous layered silicate AMH-3/cellulose acetate nanocomposite membranes for gas separations. Journal of Membrane Science, 2013, 441, 129-136.	4.1	85
103	Engineering substructure morphology of asymmetric carbon molecular sieve hollow fiber membranes. Carbon, 2014, 76, 417-434.	5.4	83
104	A high-performance hydroxyl-functionalized polymer of intrinsic microporosity for an environmentally attractive membrane-based approach to decontamination of sour natural gas. Journal of Materials Chemistry A, 2015, 3, 22794-22806.	5.2	83
105	Relationship between substructure resistance and gas separation properties of defect-free integrally skinned asymmetric membranes. Industrial & Engineering Chemistry Research, 1991, 30, 1837-1840.	1.8	82
106	Gas separation membranes: needs for combined materials science and processing approaches. Macromolecular Symposia, 2002, 188, 13-22.	0.4	81
107	Post-spinning infusion of poly(ethyleneimine) into polymer/silica hollow fiber sorbents for carbon dioxide capture. Chemical Engineering Journal, 2013, 221, 166-175.	6.6	81
108	Temperature dependence of gas transport and sorption in carbon molecular sieve membranes derived from four 6FDA based polyimides: Entropic selectivity evaluation. Carbon, 2015, 95, 995-1006.	5.4	81

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109	Relaxation Dynamics of CO ₂ Diffusion, Sorption, and Polymer Swelling for Plasticized Polyimide Membranes. <i>Macromolecules</i> , 2003, 36, 6442-6448.	2.2	80
110	Temperature effects on gas permselection properties in hexafluoro aromatic polyimides. <i>Journal of Membrane Science</i> , 1989, 46, 43-56.	4.1	77
111	Cross-Linkable Polyimide Membranes for Improved Plasticization Resistance and Permselectivity in Sour Gas Separations. <i>Macromolecules</i> , 2013, 46, 6908-6921.	2.2	77
112	Transport characterization of a polypyrrolone for gas separations. <i>Journal of Membrane Science</i> , 1991, 55, 99-117.	4.1	73
113	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.	4.1	72
114	Structure-Property Relationships for Poly(pyrrolone-imide) Gas Separation Membranes. <i>Macromolecules</i> , 2003, 36, 2374-2381.	2.2	71
115	Molecularly Engineered 6FDA-Based Polyimide Membranes for Sour Natural Gas Separation. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 14877-14883.	7.2	69
116	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.	1.8	68
117	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.	4.1	68
118	Efficient development of effective hollow fiber membranes for gas separations from novel polymers. <i>Journal of Membrane Science</i> , 2006, 278, 92-104.	4.1	67
119	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.	4.1	67
120	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.	4.1	67
121	Structure-performance characterization for carbon molecular sieve membranes using molecular scale gas probes. <i>Carbon</i> , 2015, 85, 429-442.	5.4	66
122	Study of thermal annealing on Matrimid® fiber performance in pervaporation of acetic acid and water mixtures. <i>Polymer</i> , 2006, 47, 280-288.	1.8	64
123	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.	4.1	64
124	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.	4.1	63
125	Removal of the Fermentation Inhibitor, Furfural, Using Activated Carbon in Cellulosic-Ethanol Production. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 14055-14060.	1.8	63
126	Chemically cross-linkable polyimide membranes for improved transport plasticization resistance for natural gas separation. <i>Polymer</i> , 2015, 58, 121-129.	1.8	63

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127	Characterization of low permeability gas separation membranes and barrier materials; design and operation considerations. <i>Journal of Membrane Science</i> , 2004, 245, 227-231.	4.1	62
128	Porous layered oxide/Nafion® nanocomposite membranes for direct methanol fuel cell applications. <i>Microporous and Mesoporous Materials</i> , 2009, 118, 427-434.	2.2	62
129	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.	2.3	62
130	Gas permeation and selectivity of poly(organophosphazene) membranes. <i>Macromolecules</i> , 1993, 26, 1493-1502.	2.2	61
131	Dynamic CO ₂ adsorption performance of internally cooled silica-supported poly(ethylenimine) hollow fiber sorbents. <i>AIChE Journal</i> , 2014, 60, 3878-3887.	1.8	61
132	Iron-containing carbon molecular sieve membranes for advanced olefin/paraffin separations. <i>Journal of Membrane Science</i> , 2018, 548, 609-620.	4.1	61
133	Formation of defect-free 6FDA-DAM asymmetric hollow fiber membranes for gas separations. <i>Journal of Membrane Science</i> , 2014, 459, 223-232.	4.1	60
134	Mixed matrix membranes based on 6FDA polyimide with silica and zeolite microsphere dispersed phases. <i>AIChE Journal</i> , 2015, 61, 4481-4490.	1.8	60
135	Butane isomer transport properties of 6FDA-DAM and MFI-6FDA mixed matrix membranes. <i>Journal of Membrane Science</i> , 2009, 343, 157-163.	4.1	59
136	Key Features of Polyimide-Derived Carbon Molecular Sieves. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 22322-22331.	7.2	59
137	Solubilization Isotherms of Aromatic Solutes in Surfactant Aggregates. <i>Journal of Colloid and Interface Science</i> , 1995, 170, 57-64.	5.0	58
138	Increased Molecular Weight of a Cross-Linkable Polyimide for Spinning Plasticization Resistant Hollow Fiber Membranes. <i>Macromolecules</i> , 2008, 41, 6367-6375.	2.2	57
139	High-performance ester-crosslinked hollow fiber membranes for natural gas separations. <i>Journal of Membrane Science</i> , 2013, 428, 251-259.	4.1	57
140	Poly(amide-imide)/Silica Supported PEI Hollow Fiber Sorbents for Postcombustion CO ₂ Capture by RTSA. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 19336-19346.	4.0	57
141	Hollow fiber adsorbents for CO ₂ capture: Kinetic sorption performance. <i>Chemical Engineering Journal</i> , 2011, 171, 801-810.	6.6	56
142	Hyperaging Tuning of a Carbon Molecular Sieve Hollow Fiber Membrane with Extraordinary Gas Separation Performance and Stability. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11700-11703.	7.2	56
143	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.	1.8	55
144	Antiplasticization-based enhancement of poly(ethylene terephthalate) barrier properties. <i>Polymer</i> , 2012, 53, 213-222.	1.8	53

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145	Solvothermal deposition and characterization of magnesium hydroxide nanostructures on zeolite crystals. <i>Microporous and Mesoporous Materials</i> , 2011, 139, 120-129.	2.2	51
146	Surprising plasticization benefits in natural gas upgrading using polyimide membranes. <i>Journal of Membrane Science</i> , 2020, 593, 117430.	4.1	51
147	Aging of thin polyimide-ceramic and polycarbonate-ceramic composite membranes. <i>Industrial & Engineering Chemistry Research</i> , 1993, 32, 1921-1926.	1.8	50
148	Carbon molecular sieve membrane performance tuning by dual temperature secondary oxygen doping (DTSOD). <i>Journal of Membrane Science</i> , 2013, 427, 472-478.	4.1	50
149	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, 6470-6474.	7.2	50
150	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.	4.1	49
151	Natural gas sweetening using a cellulose triacetate hollow fiber membrane illustrating controlled plasticization benefits. <i>Journal of Membrane Science</i> , 2020, 601, 117910.	4.1	49
152	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.	2.4	48
153	Penetrant transport in semicrystalline poly(ethylene furanoate). <i>Polymer</i> , 2016, 98, 305-310.	1.8	48
154	CO2 sorption and desorption performance of thermally cycled hollow fiber sorbents. <i>International Journal of Greenhouse Gas Control</i> , 2012, 10, 285-294.	2.3	47
155	Hybrid Polymer/Uio-66(Zr) and Polymer/NaY Fiber Sorbents for Mercaptan Removal from Natural Gas. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 9700-9709.	4.0	47
156	Comparison of gas transport and sorption in the ladder polymer BBL and some semi-ladder polymers. <i>Polymer</i> , 1999, 40, 5655-5664.	1.8	46
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