Juergen Caro

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7627061/publications.pdf

Version: 2024-02-01

356 papers	30,361 citations	4120 87 h-index	5806 161 g-index
384 all docs	384 docs citations	384 times ranked	17502 citing authors

#	Article	IF	Citations
1	Zeolitic Imidazolate Framework Membrane with Molecular Sieving Properties by Microwave-Assisted Solvothermal Synthesis. Journal of the American Chemical Society, 2009, 131, 16000-16001.	6.6	1,103
2	A Twoâ€Dimensional Lamellar Membrane: MXene Nanosheet Stacks. Angewandte Chemie - International Edition, 2017, 56, 1825-1829.	7.2	831
3	MXene molecular sieving membranes for highly efficient gas separation. Nature Communications, 2018, 9, 155.	5.8	825
4	Metalâ€“organic framework based mixed matrix membranes: a solution for highly efficient CO₂ capture?. Chemical Society Reviews, 2015, 44, 2421-2454.	18.7	732
5	Zeolite membranes â€“ state of their development and perspective. Microporous and Mesoporous Materials, 2000, 38, 3-24.	2.2	725
6	Zeolite membranes â€“ Recent developments and progress. Microporous and Mesoporous Materials, 2008, 115, 215-233.	2.2	657
7	Zeolite membranes â€“ a review and comparison with MOFs. Chemical Society Reviews, 2015, 44, 7128-7154.	18.7	594
8	Highâ€Flux Membranes Based on the Covalent Organic Framework COFâ€LZU1 for Selective Dye Separation by Nanofiltration. Angewandte Chemie - International Edition, 2018, 57, 4083-4087.	7.2	584
9	Molecular Sieve Membrane: Supported Metalâ€“Organic Framework with High Hydrogen Selectivity. Angewandte Chemie - International Edition, 2010, 49, 548-551.	7.2	555
10	Covalent Organic Frameworkâ€“Covalent Organic Framework Bilayer Membranes for Highly Selective Gas Separation. Journal of the American Chemical Society, 2018, 140, 10094-10098.	6.6	500
11	Steam-Stable Zeolitic Imidazolate Framework ZIF-90 Membrane with Hydrogen Selectivity through Covalent Functionalization. Journal of the American Chemical Society, 2010, 132, 15562-15564.	6.6	493
12	Effective ion sieving with Ti3C2Tx MXene membranes for production of drinking water from seawater. Nature Sustainability, 2020, 3, 296-302.	11.5	468
13	Oriented Zeolitic Imidazolate Framework-8 Membrane with Sharp H₂/C₃H₈ Molecular Sieve Separation. Chemistry of Materials, 2011, 23, 2262-2269.	3.2	452
14	Zeolitic imidazolate framework ZIF-7 based molecular sieve membrane for hydrogen separation. Journal of Membrane Science, 2010, 354, 48-54.	4.1	440
15	Bio-Inspired Polydopamine: A Versatile and Powerful Platform for Covalent Synthesis of Molecular Sieve Membranes. Journal of the American Chemical Society, 2013, 135, 17679-17682.	6.6	428
16	Ethene/ethane separation by the MOF membrane ZIF-8: Molecular correlation of permeation, adsorption, diffusion. Journal of Membrane Science, 2011, 369, 284-289.	4.1	386
17	Controllable Synthesis of Metalâ€“Organic Frameworks: From MOF Nanorods to Oriented MOF Membranes. Advanced Materials, 2010, 22, 3322-3326.	11.1	376
18	Molecularâ€Sieve Membrane with Hydrogen Permselectivity: ZIFâ€22 in LTA Topology Prepared with 3â€Aminopropyltriethoxysilane as Covalent Linker. Angewandte Chemie - International Edition, 2010, 49, 4958-4961.	7.2	354

#	Article	IF	Citations
19	Defibrillation of soft porous metal-organic frameworks with electric fields. Science, 2017, 358, 347-351.	6.0	352
20	Ethene/Ethane and Propene/Propane Separation via the Olefin and Paraffin Selective Metalâ€“Organic Framework Adsorbents CPO-27 and ZIF-8. Langmuir, 2013, 29, 8592-8600.	1.6	311
21	Formate modulated solvothermal synthesis of ZIF-8 investigated using time-resolved in situ X-ray diffraction and scanning electron microscopy. CrystEngComm, 2012, 14, 492-498.	1.3	284
22	Bicontinuous Zeolitic Imidazolate Framework ZIF-8@GO Membrane with Enhanced Hydrogen Selectivity. Journal of the American Chemical Society, 2014, 136, 14686-14689.	6.6	282
23	Water Transport with Ultralow Friction through Partially Exfoliated gâ€C₃N₄ Nanosheet Membranes with Selfâ€Supporting Spacers. Angewandte Chemie - International Edition, 2017, 56, 8974-8980.	7.2	266
24	Covalent Postâ€Functionalization of Zeolitic Imidazolate Framework ZIFâ€90 Membrane for Enhanced Hydrogen Selectivity. Angewandte Chemie - International Edition, 2011, 50, 4979-4982.	7.2	259
25	A Cobalt-Free Oxygen-Permeable Membrane Based on the Perovskite-Type Oxide Ba0.5Sr0.5Zn0.2Fe0.8O3-Î´. Advanced Materials, 2005, 17, 1785-1788.	11.1	244
26	Paralyzed membrane: Current-driven synthesis of a metal-organic framework with sharpened propene/propane separation. Science Advances, 2018, 4, eaau1393.	4.7	234
27	Novel MOFâ€Membrane for Molecular Sieving Predicted by IRâ€Diffusion Studies and Molecular Modeling. Advanced Materials, 2010, 22, 4741-4743.	11.1	222
28	High-Flux Vertically Aligned 2D Covalent Organic Framework Membrane with Enhanced Hydrogen Separation. Journal of the American Chemical Society, 2020, 142, 6872-6877.	6.6	217
29	Ultraâ€Tuning of the Aperture Size in Stiffened ZIFâ€8_Cm Frameworks with Mixedâ€Linker Strategy for Enhanced CO₂/CH₄ Separation. Angewandte Chemie - International Edition, 2019, 58, 327-331.	7.2	215
30	Hollow fibre perovskite membranes for oxygen separation. Journal of Membrane Science, 2005, 258, 1-4.	4.1	213
31	MOF-in-COF molecular sieving membrane for selective hydrogen separation. Nature Communications, 2021, 12, 38.	5.8	212
32	Tunable molecular separation by nanoporous membranes. Nature Communications, 2016, 7, 13872.	5.8	208
33	Simultaneous Production of Hydrogen and Synthesis Gas by Combining Water Splitting with Partial Oxidation of Methane in a Hollowâ€Fiber Membrane Reactor. Angewandte Chemie - International Edition, 2008, 47, 9341-9344.	7.2	204
34	A highly permeable and selective zeolitic imidazolate framework ZIF-95 membrane for H2/CO2 separation. Chemical Communications, 2012, 48, 10981.	2.2	197
35	Oppositely Charged Ti₃C₂T_x MXene Membranes with 2D Nanofluidic Channels for Osmotic Energy Harvesting. Angewandte Chemie - International Edition, 2020, 59, 8720-8726.	7.2	196
36	Robust Superhydrophobic/Superoleophilic Wrinkled Microspherical MOF@rGO Composites for Efficient Oilâ€“Water Separation. Angewandte Chemie - International Edition, 2019, 58, 5297-5301.	7.2	195

#	Article	IF	Citations
37	CO₂â€Stable and Cobaltâ€Free Dualâ€Phase Membrane for Oxygen Separation. Angewandte Chemie - International Edition, 2011, 50, 759-763.	7.2	190
38	In Situ Synthesis of MOF Membranes on ZnAl-CO₃ LDH Buffer Layer-Modified Substrates. Journal of the American Chemical Society, 2014, 136, 14353-14356.	6.6	189
39	Solution processable metalâ€“organic frameworks for mixed matrix membranes using porous liquids. Nature Materials, 2020, 19, 1346-1353.	13.3	181
40	Organosilicaâ€Functionalized Zeolitic Imidazolate Framework ZIFâ€90 Membrane with High Gasâ€Separation Performance. Angewandte Chemie - International Edition, 2012, 51, 10551-10555.	7.2	179
41	Dense ceramic oxygen permeable membranes and catalytic membrane reactors. Chemical Engineering Journal, 2013, 220, 185-203.	6.6	177
42	Are MOF membranes better in gas separation than those made of zeolites?. Current Opinion in Chemical Engineering, 2011, 1, 77-83.	3.8	169
43	Aligned molecular sieve crystals. Advanced Materials, 1992, 4, 273-276.	11.1	167
44	Large AlPO4-5 crystals by microwave heating. Zeolites, 1995, 15, 33-39.	0.9	167
45	Zeolite Membranes: From the Laboratory Scale to Technical Applications. Adsorption, 2005, 11, 215-227.	1.4	166
46	Perovskite Hollow-Fiber Membranes for the Production of Oxygen-Enriched Air. Angewandte Chemie - International Edition, 2005, 44, 6906-6909.	7.2	157
47	Amine-modified Mg-MOF-74/CPO-27-Mg membrane with enhanced H 2 /CO 2 separation. Chemical Engineering Science, 2015, 124, 27-36.	1.9	157
48	Investigation of phase structure, sintering, and permeability of perovskite-type Ba0.5Sr0.5Co0.8Fe0.2O3â^Î´ membranes. Journal of Membrane Science, 2005, 262, 20-26.	4.1	150
49	ZSM-5 membranes synthesized without organic templates using a seeding technique. Journal of Membrane Science, 1999, 159, 263-273.	4.1	149
50	Influence of ZIF-8 particle size in the performance of polybenzimidazole mixed matrix membranes for pre-combustion CO2 capture and its validation through interlaboratory test. Journal of Membrane Science, 2016, 515, 45-53.	4.1	145
51	Oriented Crystallisation on Supports and Anisotropic Mass Transport of the Metal-Organic Framework Manganese Formate. European Journal of Inorganic Chemistry, 2007, 2007, 60-64.	1.0	142
52	Metalâ€“Organic Framework UiO-66 Layer: A Highly Oriented Membrane with Good Selectivity and Hydrogen Permeance. ACS Applied Materials & Interfaces, 2017, 9, 12878-12885.	4.0	138
53	A new UiO-66-NH2 based mixed-matrix membranes with high CO2/CH4 separation performance. Microporous and Mesoporous Materials, 2019, 274, 203-211.	2.2	138
54	Synthesis and seawater desalination of molecular sieving zeolitic imidazolate framework membranes. Desalination, 2016, 385, 75-82.	4.0	137

#	Article	IF	Citations
55	Diffusion of CH4 and H2 in ZIF-8. Journal of Membrane Science, 2011, 377, 36-41.	4.1	136
56	Adsorption and diffusion of alkanes in CuBTC crystals investigated using infra-red microscopy and molecular simulations. Microporous and Mesoporous Materials, 2009, 117, 22-32.	2.2	135
57	Antibiotics Separation with MXene Membranes Based on Regularly Stacked Highâ€Aspectâ€Ratio Nanosheets. Angewandte Chemie - International Edition, 2020, 59, 9751-9756.	7.2	134
58	Ultra-thin titanium carbide (MXene) sheet membranes for high-efficient oil/water emulsions separation. Journal of Membrane Science, 2019, 592, 117361.	4.1	132
59	Direct Decomposition of Nitrous Oxide to Nitrogen by Inâ€…Situ Oxygen Removal with a Perovskite Membrane. Angewandte Chemie - International Edition, 2009, 48, 2983-2986.	7.2	130
60	Preparation and separation properties of LTA membranes by using 3-aminopropyltriethoxysilane as covalent linker. Journal of Membrane Science, 2010, 350, 5-9.	4.1	130
61	Remarkably Enhanced Gas Separation by Partial Selfâ€Conversion of a Laminated Membrane to Metalâ€“Organic Frameworks. Angewandte Chemie - International Edition, 2015, 54, 3028-3032.	7.2	125
62	Inâ€Plane Epitaxial Growth of Highly câ€Oriented NH₂â€MILâ€125(Ti) Membranes with Superior H₂/CO₂ Selectivity. Angewandte Chemie - International Edition, 2018, 57, 16088-16093.	7.2	125
63	Flexible Polypropylene-Supported ZIF-8 Membranes for Highly Efficient Propene/Propane Separation. Journal of the American Chemical Society, 2020, 142, 20915-20919.	6.6	125
64	Selective sorption uptake kinetics of n-hexane on ZSM 5 - a new method for measuring anisotropic diffusivities. The Journal of Physical Chemistry, 1993, 97, 13685-13690.	2.9	123
65	Permeation of single gases and gas mixtures through faujasite-type molecular sieve membranes. Microporous and Mesoporous Materials, 2002, 54, 27-36.	2.2	120
66	Highly hydrogen permselective ZIF-8 membranes supported on polydopamine functionalized macroporous stainless-steel-nets. Journal of Materials Chemistry A, 2014, 2, 8246-8251.	5.2	119
67	Optical second harmonic generation (SHG) on p-nitroaniline in large cyrstals of AlPO4-5 and ZSM-5. Zeolites, 1992, 12, 658-663.	0.9	115
68	A Coupling Strategy to Produce Hydrogen and Ethylene in a Membrane Reactor. Angewandte Chemie - International Edition, 2010, 49, 5656-5660.	7.2	115
69	Novel Cobalt-Free, Noble Metal-Free Oxygen-Permeable 40Pr_{0.6}Sr_{0.4}FeO_{3-Î´}â€“60Ce_{0.9}Pr_{0.1}O_{2â^Î´} Dual-Phase Membrane. Chemistry of Materials, 2012, 24, 2148-2154.	3.2	113
70	Natural Gas to Fuels and Chemicals: Improved Methane Aromatization in an Oxygenâ€Permeable Membrane Reactor. Angewandte Chemie - International Edition, 2013, 52, 13794-13797.	7.2	111
71	Titanium carbide Ti3C2Tx (MXene) enhanced PAN nanofiber membrane for air purification. Journal of Membrane Science, 2019, 586, 162-169.	4.1	110
72	An azine-linked covalent organic framework ACOF-1 membrane for highly selective CO₂/CH₄ separation. Journal of Materials Chemistry A, 2018, 6, 16849-16853.	5.2	107

#	Article	IF	Citations
73	Chromophore-zeolite composites: The organizing role of molecular sieves. Advanced Materials, 1994, 6, 413-416.	11.1	105
74	Performance of a ceramic membrane reactor with high oxygen flux Ta-containing perovskite for the partial oxidation of methane to syngas. Journal of Membrane Science, 2010, 350, 154-160.	4.1	105
75	Polydopamine-based synthesis of a zeolite imidazolate framework ZIF-100 membrane with high H₂/CO₂ selectivity. Journal of Materials Chemistry A, 2015, 3, 4722-4728.	5.2	103
76	Azobenzene Guest Molecules as Light-Switchable CO₂ Valves in an Ultrathin UiO-67 Membrane. Chemistry of Materials, 2017, 29, 3111-3117.	3.2	103
77	Pervaporation studies of n-hexane, benzene, mesitylene and their mixtures on zeolitic imidazolate framework-8 membranes. Microporous and Mesoporous Materials, 2012, 164, 288-293.	2.2	102
78	Highâ€Flux Highâ€Selectivity Metalâ€“Organic Framework MILâ€160 Membrane for Xylene Isomer Separation by Pervaporation. Angewandte Chemie - International Edition, 2018, 57, 15354-15358.	7.2	101
79	Fast adsorption-desorption kinetics of hydrocarbons in silicalite-1 by the single-step frequency response method. Zeolites, 1989, 9, 287-292.	0.9	99
80	Seeding-free synthesis of dense zeolite FAU membranes on 3-aminopropyltriethoxysilane-functionalized alumina supports. Journal of Membrane Science, 2012, 389, 272-279.	4.1	99
81	Highâ€Flux Carbon Molecular Sieve Membranes for Gas Separation. Angewandte Chemie - International Edition, 2017, 56, 7760-7763.	7.2	99
82	Switching Thin Films of Azobenzeneâ€Containing Metalâ€“Organic Frameworks with Visible Light. Chemistry - A European Journal, 2017, 23, 5434-5438.	1.7	99
83	A Twoâ€Dimensional Lamellar Membrane: MXene Nanosheet Stacks. Angewandte Chemie, 2017, 129, 1851-1855.	1.6	95
84	Fabrication of a CO2-selective membrane by stepwise liquid-phase deposition of an alkylether functionalized pillared-layered metal-organic framework [Cu2L2P]n on a macroporous support. Microporous and Mesoporous Materials, 2012, 150, 76-82.	2.2	93
85	Metalâ€“Organic Framework Co-MOF-74-Based Hostâ€“Guest Composites for Resistive Gas Sensing. ACS Applied Materials & Interfaces, 2019, 11, 14175-14181.	4.0	93
86	Neutral and Cation-Free LTA-Type Aluminophosphate (AlPO₄) Molecular Sieve Membrane with High Hydrogen Permselectivity. Journal of the American Chemical Society, 2010, 132, 2140-2141.	6.6	89
87	NMR and IR studies of zeolite H-ZSM-5 modified with orthophosphoric acid. Journal of Catalysis, 1990, 124, 367-375.	3.1	87
88	Novel Cobalt-Free Oxygen-Permeable Perovskite-Type Membrane. Chemistry of Materials, 2010, 22, 1540-1544.	3.2	87
89	Intracrystalline Transport Resistances in Nanoporous Zeolite X. ChemPhysChem, 2009, 10, 2429-2433.	1.0	85
90	Proton conductivity of sulfonic acid functionalised mesoporous materials. Microporous and Mesoporous Materials, 2007, 99, 190-196.	2.2	84

#	Article	IF	Citations
91	Comparative Study of MIL-96(Al) as Continuous Metalâ€“Organic Frameworks Layer and Mixed-Matrix Membrane. ACS Applied Materials & Interfaces, 2016, 8, 7536-7544.	4.0	84
92	Assessing Surface Permeabilities from Transient Guest Profiles in Nanoporous Host Materials. Angewandte Chemie - International Edition, 2009, 48, 3525-3528.	7.2	82
93	Catalytic Membrane Reactors for Partial Oxidation Using Perovskite Hollow Fiber Membranes and for Partial Hydrogenation Using a Catalytic Membrane Contactor. Industrial & Engineering Chemistry Research, 2007, 46, 2286-2294.	1.8	80
94	Amorphous, turbostratic and crystalline carbon membranes with hydrogen selectivity. Carbon, 2016, 106, 93-105.	5.4	79
95	Microwave-assisted synthesis of well-shaped UiO-66-NH2 with high CO2 adsorption capacity. Materials Research Bulletin, 2018, 98, 308-313.	2.7	78
96	Investigation of mass transfer through inorganic membranes with several layers. Catalysis Today, 2001, 67, 205-216.	2.2	77
97	Preparation and hydrogen permeation of BaCe0.95Nd0.05O3â^' membranes. Journal of Membrane Science, 2009, 343, 90-96.	4.1	77
98	Synthesis of multi-layer zeolite LTA membranes with enhanced gas separation performance by using 3-aminopropyltriethoxysilane as interlayer. Microporous and Mesoporous Materials, 2012, 164, 294-301.	2.2	77
99	Synthesis of AlPO4-5 aluminumphosphate molecular sieve crystals for membrane applications by microwave heating. Advanced Materials, 1995, 7, 711-714.	11.1	76
100	A Dualâ€Phase Ceramic Membrane with Extremely High H₂ Permeation Flux Prepared by Autoseparation of a Ceramic Precursor. Angewandte Chemie - International Edition, 2016, 55, 10895-10898.	7.2	76
101	Hierarchy in inorganic membranes. Chemical Society Reviews, 2016, 45, 3468-3478.	18.7	76
102	Why is it so extremely difficult to prepare shape-selective Al-rich zeolite membranes like LTA and FAU for gas separation?. Separation and Purification Technology, 2009, 66, 143-147.	3.9	75
103	Molecular Sieve Membranes for Industrial Application: Problems, Progress, Solutions. Chemical Engineering and Technology, 2002, 25, 221-230.	0.9	73
104	Sprayable, Largeâ€Area Metalâ€“Organic Framework Films and Membranes of Varying Thickness. Chemistry - A European Journal, 2017, 23, 2294-2298.	1.7	73
105	The Interaction of Guest Molecules with Coâ€MOFâ€74: A Vis/NIR and Raman Approach. Angewandte Chemie - International Edition, 2018, 57, 7434-7439.	7.2	73
106	Facile synthesis of LTA molecular sieve membranes on covalently functionalized supports by using diisocyanates as molecular linkers. Journal of Materials Chemistry, 2011, 21, 11424.	6.7	72
107	Influence of the Si/Al-ratio on the permeation properties of MFI-membranes. Microporous and Mesoporous Materials, 2005, 79, 329-337.	2.2	71
108	Intracrystalline Diffusivities and Surface Permeabilities Deduced from Transient Concentration Profiles:Â Methanol in MOF Manganese Formate. Journal of the American Chemical Society, 2007, 129, 8041-8047.	6.6	71

#	Article	IF	Citations
109	In situ formation of LDH membranes of different microstructures with molecular sieve gas selectivity. Journal of Materials Chemistry A, 2014, 2, 5716-5723.	5.2	71
110	Chemically modified ceramic membranes. Microporous and Mesoporous Materials, 1998, 22, 321-332.	2.2	70
111	Gas to Liquids: Natural Gas Conversion to Aromatic Fuels and Chemicals in a Hydrogen-Permeable Ceramic Hollow Fiber Membrane Reactor. ACS Catalysis, 2016, 6, 2448-2451.	5.5	70
112	Membrane supported catalytic dehydrogenation of iso-butane using an MFI zeolite membrane reactor. Catalysis Communications, 2001, 2, 339-345.	1.6	69
113	CO₂-Tolerant Oxygen-Permeable Fe₂O₃-Ce_{0.9}Gd_{0.1}O_{2-Î´} Dual Phase Membranes. Industrial & Engineering Chemistry Research, 2011, 50, 13508-13517.	1.8	69
114	Intracrystalline self-diffusion of H2O and CH4 in ZSM-5 zeolites. Zeolites, 1986, 6, 213-216.	0.9	68
115	Cationic Polymer Used to Capture Zeolite Precursor Particles for the Facile Synthesis of Oriented Zeolite LTA Molecular Sieve Membrane. Chemistry of Materials, 2010, 22, 4353-4355.	3.2	68
116	Large CoAPO-5 single crystals: Microwave synthesis and anisotropic optical absorption. Microporous Materials, 1994, 2, 537-541.	1.6	67
117	Partial oxidation of methane to syngas in a perovskite hollow fiber membrane reactor. Catalysis Communications, 2006, 7, 907-912.	1.6	67
118	How (Ba_{0.5}Sr_{0.5})(Fe_{0.8}Zn_{0.2})O_{3â€“Î´} and (Ba_{0.5}Sr_{0.5})(Co_{0.8}Fe_{0.2})O_{3â€“Î´} Perovskites Form via an EDTA/Citric Acid Complexing Method. Advanced Materials, 2007, 19, 2134-2140.	11.1	67
119	Organosilica functionalized zeolitic imidazolate framework ZIF-90 membrane for CO2/CH4 separation. Microporous and Mesoporous Materials, 2014, 192, 18-22.	2.2	67
120	Comparison of different catalysts in the membrane-supported dehydrogenation of propane. Catalysis Today, 2003, 82, 15-23.	2.2	66
121	Phase Stability and Permeation Behavior of a Dead-End Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3â^’Î´}Tube Membrane in High-Purity Oxygen Production. Chemistry of Materials, 2011, 23, 4765-4772.	3.2	66
122	A novel CO₂-stable dual phase membrane with high oxygen permeability. Chemical Communications, 2014, 50, 2451-2454.	2.2	66
123	Polymer Composite Membrane with Penetrating ZIFâ€7 Sheets Displays High Hydrogen Permselectivity. Angewandte Chemie - International Edition, 2019, 58, 16156-16160.	7.2	66
124	Innentitelbild: Feinâ€Tuning der PorengrÃ¶ÃŸe in versteiften ZIFâ€8_Cmâ€Gerüsten durch eine Mixedâ€Linkerâ€Strategie fÃ¼r verbesserte permeative CO₂/CH₄â€Trennung (Angew.) TjÆTQq0 0 0 rgBT /O	66	
125	Oppositely Charged Ti₃C₂T_x MXene Membranes with 2D Nanofluidic Channels for Osmotic Energy Harvesting. Angewandte Chemie, 2020, 132, 8798-8804.	1.6	65
126	Polarized Raman spectra of selenium species confined in nanochannels of AlPO4-5 single crystals. Chemical Physics Letters, 1997, 280, 17-23.	1.2	61

#	Article	IF	Citations
127	Change of gas permeation by photoinduced switching of zeolite-azobenzene membranes of type MFI and FAU. Microporous and Mesoporous Materials, 2002, 54, 15-26.	2.2	61
128	A CO₂-stable reduction-tolerant Nd-containing dual phase membrane for oxyfuel CO₂ capture. Journal of Materials Chemistry A, 2014, 2, 7780-7787.	5.2	61
129	Preparation of MFI membranes of enlarged area with high reproducibility. Microporous and Mesoporous Materials, 2001, 49, 25-37.	2.2	59
130	New one-dimensional membrane: aligned AlPO4-5 molecular sieve crystals in a nickel foil. Microporous Materials, 1994, 3, 201-206.	1.6	58
131	Influence of CO2 on the oxygen permeation performance of perovskite-type BaCoxFeyZrzO3â˜Î´ hollow fiber membranes. Journal of Membrane Science, 2010, 364, 132-137.	4.1	58
132	MOF based MMMs with enhanced selectivity due to hindered linker distortion. Journal of Membrane Science, 2015, 492, 181-186.	4.1	58
133	NH 2 -MIL-125 as membrane for carbon dioxide sequestration: Thin supported MOF layers contra Mixed-Matrix-Membranes. Journal of Membrane Science, 2016, 516, 185-193.	4.1	58
134	Balancing the Grain Boundary Structure and the Framework Flexibility through Bimetallic Metalâ€“Organic Framework (MOF) Membranes for Gas Separation. Journal of the American Chemical Society, 2020, 142, 9582-9586.	6.6	58
135	Hollow fiber membrane reactors for the oxidative activation of ethane. Catalysis Today, 2006, 118, 98-103.	2.2	57
136	Influence of the preparation methods on the microstructure and oxygen permeability of a CO₂â€stable dual phase membrane. AICHE Journal, 2011, 57, 2738-2745.	1.8	57
137	Oxygen permeation study of perovskite hollow fiber membranes. Catalysis Today, 2005, 104, 126-130.	2.2	56
138	Steam-stable hydrophobic ITQ-29 molecular sieve membrane with H2 selectivity prepared by secondary growth using Kryptofix 222 as SDA. Chemical Communications, 2010, 46, 7748.	2.2	56
139	Fast electrophoretic preparation of large-area two-dimensional titanium carbide membranes for ion sieving. Chemical Engineering Journal, 2021, 408, 127806.	6.6	56
140	The importance of lattice flexibility for the migration of ethane in ZIF-8: Molecular dynamics simulations. Microporous and Mesoporous Materials, 2013, 174, 126-134.	2.2	55
141	Covalent synthesis of dense zeolite LTA membranes on various 3-chloropropyltrimethoxysilane functionalized supports. Journal of Membrane Science, 2013, 437, 57-64.	4.1	55
142	Synthesis of highly hydrophobic and permselective metalâ€“organic framework Zn(BDC)(TED)0.5 membranes for H2/CO2 separation. Journal of Membrane Science, 2014, 454, 126-132.	4.1	55
143	Iso-butanol dehydration by pervaporation using zeolite LTA membranes prepared on 3-aminopropyltriethoxysilane-modified alumina tubes. Journal of Membrane Science, 2014, 455, 200-206.	4.1	54
144	Matrimid-Based Mixed Matrix Membranes: Interpretation and Correlation of Experimental Findings for Zeolitic Imidazolate Frameworks as Fillers in H₂/CO₂ Separation. Industrial & Engineering Chemistry Research, 2015, 54, 1103-1112.	1.8	54

#	Article	IF	Citations
145	New proton conducting hybrid membranes for HT-PEMFC systems based on polysiloxanes and SO3H-functionalized mesoporous Si-MCM-41 particles. Journal of Membrane Science, 2008, 316, 164-175.	4.1	53
146	Oxygen production at low temperature using dense perovskite hollow fiber membranes. Journal of Membrane Science, 2008, 322, 214-217.	4.1	53
147	The change of the unit cell dimension of different zeolite types by heating and its influence on supported membrane layers. Microporous and Mesoporous Materials, 2009, 117, 10-21.	2.2	53
148	High-Flux Oxygen-Transporting Membrane Pr_{0.6}Sr_{0.4}Co_{0.5}Fe_{0.5}O_{3â^'Î´}: CO₂ Stability and Microstructure. ACS Applied Materials & Interfaces, 2014, 6, 10274-10282.	4.0	53
149	Hierarchical Nanostructures of Metalâ€Organic Frameworks Applied in Gas Separating ZIFâ€8â€onâ€ZIFâ€67 Membranes. Chemistry - A European Journal, 2018, 24, 5728-5733.	1.7	53
150	Proof of the ISS-concept for LTA and FAU membranes and their characterization by extended gas permeation studies. Microporous and Mesoporous Materials, 2007, 102, 1-20.	2.2	52
151	Oxygen selective ceramic hollow fiber membranes for partial oxidation of methane. AICHE Journal, 2009, 55, 2657-2664.	1.8	52
152	Simultaneous overcome of the equilibrium limitations in BSCF oxygen-permeable membrane reactors: Water splitting and methane coupling. Catalysis Today, 2012, 193, 2-7.	2.2	52
153	B-site La-doped BaFe_{0.95â^'x}La_xZr_{0.05}O_{3â^'Î´}perovskite-type membranes for oxygen separation. Journal of Materials Chemistry A, 2013, 1, 746-751.	5.2	52
154	UiO-66 and UiO-66-NH2 based sensors: Dielectric and FTIR investigations on the effect of CO2 adsorption. Microporous and Mesoporous Materials, 2020, 302, 110227.	2.2	52
155	Onh the anisotropy of the optical properties of zeolites loaded with organic molecules. Zeolites, 1992, 12, 433-434.	0.9	50
156	Hydrogen Production by Water Dissociation in Surfaceâ€Modified BaCo_xFe_yZr_{1â^'xâ^'y}O_{3â^'Î´} Hollowâ€Fiber Membrane Reactor with Improved Oxygen Permeation. Chemistry - A European Journal, 2010, 16, 7898-7903.	1.7	50
157	Efficient Synthesis of Dimethyl Ether from Methanol in a Bifunctional Zeolite Membrane Reactor. Angewandte Chemie - International Edition, 2016, 55, 12678-12682.	7.2	49
158	Highly effective NO decomposition by in situ removal of inhibitor oxygen using an oxygen transporting membrane. Chemical Communications, 2009, , 6738.	2.2	48
159	Anisotropic Gas Separation in Oriented ZIFâ€95 Membranes Prepared by Vaporâ€Assisted Inâ€Plane Epitaxial Growth. Angewandte Chemie - International Edition, 2020, 59, 20858-20862.	7.2	48
160	Dynamics of Single Selenium Chains Confined in One-Dimensional Nanochannels ofAlPO4â^'5: Temperature Dependencies of the First- and Second-Order Raman Spectra. Physical Review Letters, 1999, 82, 1955-1958.	2.9	47
161	In situ high temperature X-ray diffraction studies of mixed ionic and electronic conducting perovskite-type membranes. Materials Letters, 2005, 59, 3750-3755.	1.3	46
162	A novel CAU-10-H MOF membrane for hydrogen separation under hydrothermal conditions. Journal of Membrane Science, 2016, 513, 40-46.	4.1	46

#	Article	IF	Citations
163	Evaluation of perovskites in hollow fibre and disk geometry in catalytic membrane reactors and in oxygen separators. Catalysis Today, 2006, 118, 128-135.	2.2	45
164	Effect of crystal intergrowth supporting substances (ISS) on the permeation properties of MFI membranes with enhanced Al-content. Microporous and Mesoporous Materials, 2006, 97, 88-96.	2.2	45
165	Monitoring Molecular Mass Transfer in Cation-Free Nanoporous Host Crystals of Type AlPO-LTA. Journal of the American Chemical Society, 2012, 134, 7725-7732.	6.6	45
166	A CO₂â€stable hollowâ€fiber membrane with high hydrogen permeation flux. AIChE Journal, 2015, 61, 1997-2007.	1.8	45
167	Comparative permeation studies on three supported membranes: Pure ZIF-8, pure polymethylphenylsiloxane, and mixed matrix membranes. Microporous and Mesoporous Materials, 2014, 189, 210-215.	2.2	44
168	Significantly Enhanced Separation using ZIFâ€8 Membranes by Partial Conversion of Calcined Layered Double Hydroxide Precursors. ChemSusChem, 2015, 8, 3582-3586.	3.6	44
169	Gate Opening, Diffusion, and Adsorption of CO₂ and N₂ Mixtures in ZIF-8. Journal of Physical Chemistry C, 2016, 120, 23458-23468.	1.5	44
170	Exploring the nature of surface barriers on MOF Zn(tbip) by applying IR microscopy in high temporal and spatial resolution. Microporous and Mesoporous Materials, 2010, 129, 340-344.	2.2	43
171	Remarkably Enhanced Gas Separation by Partial Selfâ€Conversion of a Laminated Membrane to Metalâ€“Organic Frameworks. Angewandte Chemie, 2015, 127, 3071-3075.	1.6	43
172	Molecular sieving through interlayer galleries. Journal of Materials Chemistry A, 2014, 2, 1235-1238.	5.2	42
173	Production of high-purity oxygen by perovskite hollow fiber membranes swept with steam. Journal of Membrane Science, 2006, 284, 5-8.	4.1	41
174	Improved water dissociation and nitrous oxide decomposition by in situ oxygen removal in perovskite catalytic membrane reactor. Catalysis Today, 2010, 156, 187-190.	2.2	41
175	Hydrophilic SOD and LTA membranes for membrane-supported methanol,Âdimethylether and dimethylcarbonate synthesis. Microporous and Mesoporous Materials, 2015, 207, 33-38.	2.2	41
176	Photo-switchable smart metalâ€“organic framework membranes with tunable and enhanced molecular sieving performance. Journal of Materials Chemistry A, 2018, 6, 24949-24955.	5.2	41
177	Molecular Mobility Measurement of Hydrocarbons in Zeolites by NMR Techniques. Advances in Catalysis, 1993, 39, 351-414.	0.1	40
178	Photoinduced switching in nanocomposites of azobenzene and molecular sieves. Advanced Materials, 1997, 9, 567-570.	11.1	40
179	Oxygen Transport Membrane for Thermochemical Conversion of Water and Carbon Dioxide into Synthesis Gas. ACS Sustainable Chemistry and Engineering, 2017, 5, 8657-8662.	3.2	40
180	Smart Metalâ€Organic Frameworks (MOFs): Switching Gas Permeation through MOF Membranes by External Stimuli. Chemical Engineering and Technology, 2018, 41, 224-234.	0.9	40

#	Article	IF	Citations
181	Raman study on p-nitroaniline in channels of the molecular sieve AlPO4-5. Journal of Raman Spectroscopy, 1993, 24, 603-608.	1.2	39
182	Novel hollow fibre membrane reactor for the partial oxidation of methane. Catalysis Today, 2006, 118, 44-51.	2.2	39
183	Rotational and Translational Motion of Benzene in ZIF-8 Studied by ²H NMR: Estimation of Microscopic Self-Diffusivity and Its Comparison with Macroscopic Measurements. Journal of Physical Chemistry C, 2014, 118, 12873-12879.	1.5	39
184	Olefin Production by a Multistep Oxidative Dehydrogenation in a Perovskite Hollowâ€Fiber Membrane Reactor. ChemCatChem, 2009, 1, 401-405.	1.8	37
185	Gate opening effect for carbon dioxide in ZIF-8 by molecular dynamics â€“ Confirmed, but at high CO2 pressure. Chemical Physics Letters, 2016, 648, 178-181.	1.2	37
186	One-pot synthesis of NiAlâ€“CO₃LDH anti-corrosion coatings from CO₂-saturated precursors. RSC Advances, 2015, 5, 29552-29557.	1.7	36
187	Hydrogen permeability and stability of BaCe0.85Tb0.05Zr0.1O3â^' asymmetric membranes. Journal of Membrane Science, 2015, 488, 173-181.	4.1	36
188	Highly hydrogen-permselective zeolitic imidazolate framework ZIF-8 membranes prepared on coarse and macroporous tubes through repeated synthesis. Separation and Purification Technology, 2015, 146, 68-74.	3.9	36
189	Diffusion, cracking and coking on HZSM-5 of various morphologies. Applied Catalysis, 1988, 42, 15-27.	1.1	35
190	Optical characterization of organized adsorbates in zeolite microcrystals: Polarized absorption spectroscopy. Zeolites, 1996, 16, 281-286.	0.9	35
191	Silver-exchanged zeolite LTA molecular sieving membranes with enhanced hydrogen selectivity. Journal of Membrane Science, 2016, 511, 1-8.	4.1	35
192	Wasserâ€Hochflussmembranen auf Basis der kovalenten organischen GerÃ¼ststruktur COFâ€LZU1 fÃ¼r die Farbstoffabtrennung durch Nanofiltration. Angewandte Chemie, 2018, 130, 4147-4151.	1.6	35
193	Highly Selective CO₂ Conversion to Methanol in a Bifunctional Zeolite Catalytic Membrane Reactor. Angewandte Chemie - International Edition, 2021, 60, 18289-18294.	7.2	35
194	Experimental and modeling study of the O2-enrichment by perovskite fibers. AICHE Journal, 2006, 52, 3118-3125.	1.8	34
195	Mixed oxygen ion and electron conducting hollow fiber membranes for oxygen separation. Solid State Ionics, 2006, 177, 2255-2259.	1.3	34
196	Facile synthesis of zeolite FAU molecular sieve membranes on bio-adhesive polydopamine modified Al2O3 tubes. Journal of Membrane Science, 2015, 494, 174-181.	4.1	34
197	Revision of Charnellâ€™s procedure towards the synthesis of large and uniform crystals of zeolites A and X. Microporous and Mesoporous Materials, 2006, 90, 53-61.	2.2	33
198	A novel dual phase membrane 40 wt% Nd_{0.6}Sr_{0.4}CoO_{3â^'Î´}â€“60 wt% Ce_{0.9}Nd_{0.1}O_{2â^'Î´}: design, synthesis and properties. Journal of Materials Chemistry A, 2018, 6, 84-92.	5.2	32

#	Article	IF	Citations
199	Butene isomers separation on titania supported MFI membranes at conditions relevant for practice. Journal of Membrane Science, 2009, 329, 11-17.	4.1	31
200	Water Transport with Ultralow Friction through Partially Exfoliated gâ€C₃N₄ Nanosheet Membranes with Selfâ€Supporting Spacers. Angewandte Chemie, 2017, 129, 9102-9108.	1.6	31
201	Elimination of Grain Boundary Defects in Zeolitic Imidazolate Framework ZIFâ€95 Membrane via Solventâ€Free Secondary Growth. Angewandte Chemie - International Edition, 2021, 60, 25463-25467.	7.2	31
202	A novel zincum-doped perovskite-type ceramic membrane for oxygen separation. Journal of Alloys and Compounds, 2009, 484, 386-389.	2.8	30
203	Stepwise synthesis of sandwich-structured composite zeolite membranes with enhanced separation selectivity. Chemical Communications, 2012, 48, 3542.	2.2	30
204	Novel CO₂-tolerant Al-containing membranes for high-temperature oxygen separation. Journal of Materials Chemistry A, 2015, 3, 24008-24015.	5.2	30
205	Importance of ZIF-90 Lattice Flexibility on Diffusion, Permeation, and Lattice Structure for an adsorbed H₂/CH₄ Gas Mixture: A Re-Examination by Gibbs Ensemble Monte Carlo and Molecular Dynamics Simulations. Journal of Physical Chemistry C, 2017, 121, 10455-10462.	1.5	30
206	Ion conductivity of nano-scaled Al-rich ZSM-5 synthesized in the pores of carbon black. Microporous and Mesoporous Materials, 2009, 120, 47-52.	2.2	29
207	Effect of the B-Site Composition on the Oxygen Permeability and the CO₂ Stability of Pr_{0.6}Sr_{0.4}Co_xFe_{1â€“x}O_{3â^Î´} (0.0 â‰¤ x â‰¤ 1.0) Membranes. Chemistry of Materials, 2015, 27, 2911-2919.	3.2	29
208	Methane in zeolitic imidazolate framework ZIF-90: Adsorption and diffusion by molecular dynamics and Gibbs ensemble Monte Carlo. Microporous and Mesoporous Materials, 2016, 235, 69-77.	2.2	29
209	On the Better Understanding of the Surprisingly High Performance of Metalâ^'Organic Framework-Based Mixed-Matrix Membranes Using the Example of UiO-66 and Matrimid. ACS Applied Materials & Interfaces, 2017, 9, 41553-41558.	4.0	29
210	Development of a membrane reactor for the partial oxidation of hydrocarbons: direct oxidation of propane to acrolein. Journal of Membrane Science, 2002, 198, 119-128.	4.1	28
211	Benefit of Microscopic Diffusion Measurement for the Characterization of Nanoporous Materials. Chemical Engineering and Technology, 2009, 32, 1494-1511.	0.9	28
212	Oxidative Coupling of Methane with High C₂ Yield by using Chlorinated Perovskite Ba_{0.5}Sr_{0.5}Fe_{0.2}Co_{0.8}O_{3â^'Î´} as Catalyst and N₂O as Oxidant. ChemCatChem, 2010, 2, 1539-1542.	1.8	28
213	N2 in ZIF-8: Sorbate induced structural changes and self-diffusion. Microporous and Mesoporous Materials, 2014, 187, 1-6.	2.2	28
214	Idiosyncrasies of Co2(dhtp): In situ-annealing by methanol. Microporous and Mesoporous Materials, 2014, 183, 117-123.	2.2	28
215	Concentration dependence of intracrystalline self-diffusion in zeolites. Adsorption Science and Technology, 1985, 2, 229-239.	1.5	27
216	Facile synthesis of molecular sieve membranes following â€œlike grows likeâ€•principle. Journal of Membrane Science, 2018, 559, 1-7.	4.1	27

#	Article	IF	Citations
217	Diffusion of C4hydrocarbons in silicalite-1. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 3943-3948.	1.7	26
218	Development of a H2-selective SiO2-membrane for the catalytic dehydrogenation of propane. Separation and Purification Technology, 2001, 25, 3-9.	3.9	26
219	Oxidative dehydrogenation of propane on TiO2 supported antimony oxide/vanadia catalysts. Catalysis Communications, 2005, 6, 1-5.	1.6	26
220	Permeation properties of bi-layered Al-ZSM-5/Silicalite-1 membranes. Microporous and Mesoporous Materials, 2007, 98, 55-61.	2.2	26
221	Selective oxidation of CH4 and C2H6 over a mixed oxygen ion and electron conducting perovskiteâ€"A TAP and membrane reactors study. Journal of Molecular Catalysis A, 2009, 297, 142-149.	4.8	26
222	Quo Vadis, MOF?. Chemie-Ingenieur-Technik, 2018, 90, 1759-1768.	0.4	26
223	Polymer Composite Membrane with Penetrating ZIFâ€7 Sheets Displays High Hydrogen Permselectivity. Angewandte Chemie, 2019, 131, 16302-16306.	1.6	26
224	Surface barriers on nanoporous particles: A new method of their quantitation by PFG NMR. Microporous and Mesoporous Materials, 2007, 104, 89-96.	2.2	25
225	Catalysis in Micro-structured Membrane Reactors with Nano-designed Membranes. Chinese Journal of Catalysis, 2008, 29, 1169-1177.	6.9	25
226	Partial oxidation of methane in hollowâ€fiber membrane reactors based on alkalineâ€earth metalâ€free CO₂â€tolerant oxide. AICHE Journal, 2014, 60, 3587-3595.	1.8	25
227	Influence of Si/Al ratio, pre-treatment and measurement conditions on permeation properties of MFI membranes on metallic and ceramic supports. Microporous and Mesoporous Materials, 2005, 82, 147-157.	2.2	24
228	Capacitance and Field-Driven Electron Transport in Electrochemically Self-Assembled Nanoporous ZnO/Dye Hybrid Films. Journal of Physical Chemistry B, 2005, 109, 12560-12566.	1.2	24
229	Phase development in the catalytic system V2O5/TiO2 under oxidising conditions. Journal of the European Ceramic Society, 2006, 26, 3287-3294.	2.8	24
230	Enhanced oxygen permeability of novel Cu-containing CO2-tolerant dual-phase membranes. Journal of Membrane Science, 2016, 503, 158-165.	4.1	24
231	Hydrogen Purification through a Highly Stable Dualâ€Phase Oxygenâ€Permeable Membrane. Angewandte Chemie - International Edition, 2021, 60, 5204-5208.	7.2	24
232	Fabrication of a flexible hydrogen-bonded organic framework based mixed matrix membrane for hydrogen separation. Journal of Membrane Science, 2022, 643, 120021.	4.1	24
233	Seeding-free synthesis of large tubular zeolite FAU membranes for dewatering of dimethyl carbonate by pervaporation. Microporous and Mesoporous Materials, 2020, 292, 109713.	2.2	23
234	Compatibility of hydrogen transfer via Pd-membranes with the rates of heterogeneously catalysed steam reforming. Catalysis Today, 2005, 104, 267-273.	2.2	22

#	Article	IF	Citations
235	Perovskite hollow fibre membranes in the partial oxidation of methane to synthesis gas in a membrane reactor. Desalination, 2006, 199, 415-417.	4.0	22
236	Solvothermal synthesis of germanosilicate-sodalite and silica-sodalite: Effects of water, germanium and fluoride. Microporous and Mesoporous Materials, 2007, 100, 95-102.	2.2	22
237	Preparation and characterization of sodium-free nanocrystalline sodalite. Microporous and Mesoporous Materials, 2008, 110, 3-10.	2.2	22
238	Preparation of large and well-shaped LTA-type AlPO4 crystals by using crown ether Kryptofix 222 as structure directing agent. Microporous and Mesoporous Materials, 2010, 129, 90-99.	2.2	22
239	Supported SOD membrane with steam selectivity by a two-step repeated hydrothermal synthesis. Microporous and Mesoporous Materials, 2014, 192, 8-13.	2.2	22
240	MOFâ€Based Mixedâ€Matrix Membranes in Gas Separation â€“ Mystery and Reality. Chemie-Ingenieur-Technik, 2016, 88, 1788-1797.	0.4	22
241	Platinum Electrodes for Oxygen Reduction Catalysis Designed by Ultrashort Pulse Laser Structuring. ChemElectroChem, 2017, 4, 570-576.	1.7	22
242	Methane conversion to syngas and hydrogen in a dualÂphase Ce0.8Sm0.2O2-Î´-Sr2Fe1.5Mo0.5O5+Î´ membrane reactor with improved stability. International Journal of Hydrogen Energy, 2018, 43, 14478-14485.	3.8	22
243	High CO2-tolerance oxygen permeation dual-phase membranes Ce0.9Pr0.1O2−Pr0.6Sr0.4Fe0.8Al0.2O3−. Journal of Alloys and Compounds, 2019, 806, 500-509.	2.8	22
244	High-flux dual-phase percolation membrane for oxygen separation. Journal of the European Ceramic Society, 2019, 39, 4882-4890.	2.8	22
245	Dehydrogenation of propane with selective hydrogen combustion: A mechanistic study by transient analysis of products. Catalysis Communications, 2010, 11, 1211-1214.	1.6	21
246	Propane/propene permeation through Na-X membranes: TheÂinterplay of separation performance and pre-synthetic supportÂfunctionalization. Microporous and Mesoporous Materials, 2015, 215, 20-28.	2.2	21
247	Antibiotics Separation with MXene Membranes Based on Regularly Stacked Highâ€Aspectâ€Ratio Nanosheets. Angewandte Chemie, 2020, 132, 9838-9843.	1.6	20
248	The influence of chemisorbed molecules on mass transfer in H-ZSM-5-type zeolites and the location of BrÃ¸nsted acid sites. Journal of Catalysis, 1988, 114, 186-189.	3.1	19
249	On comparing permeation through MatrimidÂ®-based mixed matrix and multilayer sandwich FAU membranes: H2/CO2 separation, support functionalization and ion exchange. International Journal of Hydrogen Energy, 2017, 42, 279-288.	3.8	19
250	Oxidative dehydrogenation of propane in a perovskite membrane reactor with multiâ€step oxygen insertion. AICHE Journal, 2010, 56, 2390-2396.	1.8	18
251	Feinâ€Tuning der PorengrÃ¶ße in versteiften ZIFâ€8_Cmâ€Gerüsten durch eine Mixedâ€Linkerâ€Strategie fÃ¼r verbesserte permeative CO₂/CH₄â€Trennung. Angewandte Chemie, 2019, 131, 333-337.	1.6	18
252	Oxygen permeability and structural stability of a novel tantalumâ€doped perovskite BaCo_{0.7}Fe_{0.2}Ta_{0.1}O_{3â^’Î´}. AICHE Journal, 2010, 56, 604-610.	1.8	17

#	Article	IF	Citations
253	Pressed graphite crystals as gas separation membrane for steam reforming of ethanol. Journal of Membrane Science, 2014, 469, 284-291.	4.1	17
254	Post-synthetic modification of highly stable UiO-66-NH2 membranes on porous ceramic tubes with enhanced H2 separation. Microporous and Mesoporous Materials, 2021, 313, 110823.	2.2	17
255	Sorption kinetics ofn-decane on 5A zeolites from a nonadsorbing liquid solvent. AIChE Journal, 1980, 26, 1044-1046.	1.8	16
256	Partial oxidation of propane to acrolein in a membrane reactor â€“ Experimental data and computer simulation. Catalysis Communications, 2002, 3, 465-470.	1.6	16
257	Ceramic Membranes for Water Separation from Organic Solvents. Chemical Engineering and Technology, 2002, 25, 357-363.	0.9	16
258	Controlled growth of zinc oxide crystals with tunable shape. Journal of Crystal Growth, 2010, 312, 947-952.	0.7	16
259	High-purity oxygen production by a dead-end Ba0.5Sr0.5Co0.8Fe0.2O3â˜Î´ tube membrane. Catalysis Today, 2012, 193, 95-100.	2.2	16
260	Interfacial Au/MoC Catalyst for Low-Temperature Water-Gas Shift Reaction. CheM, 2017, 3, 209-210.	5.8	16
261	From computer design to gas separation. Nature Materials, 2020, 19, 374-375.	13.3	16
262	Separation of nitrogen dioxide from the gas mixture with nitrogen by use of ZIF materials; computer simulation studies. Computational Materials Science, 2019, 168, 246-252.	1.4	15
263	Comment on hydrocarbon diffusivity in zeolites. Chemical Engineering Science, 1985, 40, 2169-2170.	1.9	14
264	Zeta Potential Measurement in Catalyst Preparations. Chemical Engineering and Technology, 2005, 28, 182-186.	0.9	14
265	Diffusion in porous functional materials: Zeolite gas separation membranes, proton exchange membrane fuel cells, dye sensitized solar cells. Microporous and Mesoporous Materials, 2009, 125, 79-84.	2.2	14
266	Hochflussâ€Hochselektivitätsâ€MOFâ€Membran: Geträgerte MILâ€160â€Schicht für die Trennung der Xylolisomere durch Pervaporation. Angewandte Chemie, 2018, 130, 15580-15584.	1.6	14
267	Seeding-free synthesis of high-performance MFI zeolite membranes on superhydrophobic supports inspired by â€œlike grows likeâ€•principle. Microporous and Mesoporous Materials, 2019, 288, 109589.	2.2	14
268	Role of the metal cation in the dehydration of the microporous metalâ€“organic frameworks CPO-27-M. Microporous and Mesoporous Materials, 2020, 309, 110503.	2.2	14
269	Anisotropic Gas Separation in Oriented ZIFâ€95 Membranes Prepared by Vaporâ€Assisted Inâ€Plane Epitaxial Growth. Angewandte Chemie, 2020, 132, 21044-21048.	1.6	14
270	Humidity-Mediated Anisotropic Proton Conductivity through the 1D Channels of Co-MOF-74. Nanomaterials, 2020, 10, 1263.	1.9	14

#	Article	IF	Citations
271	Diffusion of aromatic guest molecules in zeolite NaX studied by pulsed field gradient NMR. Microporous and Mesoporous Materials, 2009, 120, 98-103.	2.2	13
272	Solid-state dye-sensitized ZnO solar cells prepared by low-temperature methods. Journal of Applied Electrochemistry, 2011, 41, 445-452.	1.5	13
273	Codoping Strategy To Improve Stability and Permeability of Ba_{0.6}Sr_{0.4}FeO_{3â^Î´}-Based Perovskite Membranes. Industrial & Engineering Chemistry Research, 2016, 55, 10386-10393.	1.8	13
274	Highâ€Flux Carbon Molecular Sieve Membranes for Gas Separation. Angewandte Chemie, 2017, 129, 7868-7871.	1.6	13
275	PFG NMR Self-Diffusion Study of n-Paraffins Adsorbed on Silica Gel. Journal of Colloid and Interface Science, 1993, 159, 366-371.	5.0	12
276	Catalytic Membrane Reactors â€“ Lab Curiosity or Key Enabling Technology?. Chemie-Ingenieur-Technik, 2014, 86, 1901-1905.	0.4	12
277	Deuterium/hydrogen permeation through different molecular sieve membranes: ZIF, LDH, zeolite. Microporous and Mesoporous Materials, 2015, 216, 127-132.	2.2	12
278	Improved hydrogen selectivity of Surface Modified Graphite (SMG) membranes: Permeation experiments and characterisation by micro-Raman spectroscopy and XPS. Journal of Membrane Science, 2017, 528, 316-325.	4.1	12
279	Der EinfluÃŸ von OberflÃchenbarrieren auf den Sorptionsvorgang an 5Aâ€Zeolithen. Zeitschrift FÃ¼r Chemie, 1976, 16, 331-332.	0.0	12
280	NMR Characterization of Zeolite H-ZSM-5 after Post-Synthesis Modification with H3PO4. Studies in Surface Science and Catalysis, 1989, 52, 295-304.	1.5	11
281	Facile and reproducible synthesis of ITQ-29 zeolite by using Kryptofix 222 as the structure directing agent. Microporous and Mesoporous Materials, 2010, 130, 352-356.	2.2	11
282	Inverted Fuel Cell: Roomâ€Temperature Hydrogen Separation from an Exhaust Gas by Using a Commercial Shortâ€Circuited PEM Fuel Cell without Applying any Electrical Voltage. Angewandte Chemie - International Edition, 2015, 54, 7790-7794.	7.2	11
283	Molecular simulations of a CO2/CO mixture in MIL-127. Chemical Physics Letters, 2018, 696, 86-91.	1.2	11
284	Diffusion coefficients in nanoporous solids derived from membrane permeation measurements. Adsorption, 2021, 27, 283-293.	1.4	11
285	Aufbau und katalytische AktivitÃt hierarchisch strukturierter Oxid-Katalysatoren â€“ Teil 1. Chemie-Ingenieur-Technik, 2003, 75, 872-877.	0.4	10
286	Inside Cover: Molecular Sieve Membrane: Supported Metalâ€“Organic Framework with High Hydrogen Selectivity (Angew. Chem. Int. Ed. 3/2010). Angewandte Chemie - International Edition, 2010, 49, 464-464.	7.2	10
287	Spiky Nickel Electrodes for Electrochemical Oxygen Evolution Catalysis by Femtosecond Laser Structuring. International Journal of Electrochemistry, 2018, 2018, 1-12.	2.4	10
288	Methanolâ€toâ€Olefins in a Membrane Reactor with inâ€…situ Steam Removal â€“ The Decisive Role of Coking. ChemCatChem, 2020, 12, 273-280.	1.8	10

#	Article	IF	Citations
289	Volterra integral equations for the determination of diffusion coefficients in fast pressure-jump sorption kinetics experiments. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 3087-3091.	1.7	9
290	Preparation and hydrogen permeation properties of BaCe0.95Nd0.05O3â˜Î´ membranes. Chinese Chemical Letters, 2008, 19, 1256-1259.	4.8	9
291	Hydrothermal synthesis of uniform and well-shaped ITQ-29 crystals. Microporous and Mesoporous Materials, 2009, 124, 153-161.	2.2	9
292	Novel zinc oxide twins with perfect mirror symmetry by solvothermal synthesis method. CrystEngComm, 2010, 12, 685-687.	1.3	9
293	Stereoselective alkylation on aluminophosphate molecular sieves. Zeolites, 1994, 14, 486-488.	0.9	8
294	Modification of fluorescence of p-N,N-dimethylaminobenzonitrile by adsorption in molecular sieves. Zeolites, 1996, 16, 138-141.	0.9	8
295	Polarized absorption spectroscopy on microcrystals An essential tool for the characterization of zeolite new materials. Microporous Materials, 1996, 6, 43-49.	1.6	8
296	Keramikmembranen mit molekularen Trenneigenschaften - Teil 1: SiOX-funktionalisierte Membranen. Chemie-Ingenieur-Technik, 1998, 70, 860-866.	0.4	8
297	Plasmonic Semiconductor Nanoparticles in a Metalâ€“Organic Framework Structure and Their in Situ Cation Exchange. Chemistry of Materials, 2016, 28, 7511-7518.	3.2	8
298	Optical properties of self-assembled dipole chains in zeolites. Studies in Surface Science and Catalysis, 1994, 84, 2277-2284.	1.5	7
299	Fabrication of MTN-type zeolite by self-assembling of supramolecular compound. Journal of Crystal Growth, 2009, 311, 4570-4574.	0.7	7
300	Shape evolution of zinc oxide from twinned disks to single spindles through solvothermal synthesis in binary solvents. Journal of Crystal Growth, 2010, 312, 2977-2982.	0.7	7
301	Are MOF Membranes Better Than Those Made of Zeolites?. Procedia Engineering, 2012, 44, 1-2.	1.2	7
302	Propylene/Propane Separation in Fixedâ€Bed Adsorber and Membrane Permeation. Chemie-Ingenieur-Technik, 2013, 85, 1694-1699.	0.4	7
303	Effiziente Synthese von Dimethylether aus Methanol in einem Membranreaktor mit bifunktioneller Membran. Angewandte Chemie, 2016, 128, 12869-12873.	1.6	7
304	Dense perovskite hollow fibre membranes. Desalination, 2006, 199, 355-356.	4.0	6
305	Novel Ba0.5Sr0.5Fe0.8Zn0.2O3â˜ membranes for POM. Chinese Chemical Letters, 2009, 20, 250-252.	4.8	6
306	Tracing Pore-Space Heterogeneities in X-Type Zeolites by Diffusion Studies. Langmuir, 2011, 27, 416-419.	1.6	6

#	Article	IF	Citations
307	An Untrodden Path: Versatile Fabrication of Selfâ€Supporting Polymerâ€Stabilized Percolation Membranes (PSPMs) for Gas Separation. Chemistry - A European Journal, 2017, 23, 6522-6526.	1.7	6
308	Vis/NIRâ€•und Ramanâ€Untersuchung der Wechselwirkung von GastmolekÃ¼len mit Coâ€MOFâ€74. Angewandte Chemie, 2018, 130, 7556-7561.	1.6	6
309	Porous Nickel Nanoâ€Foam by Femtosecond Laser Structuring for Supercapacitor Application. ChemElectroChem, 2018, 5, 3688-3694.	1.7	6
310	Combined Adsorption and Reaction in the Ternary Mixture N₂, N₂O₄, NO₂ on MIL-127 Examined by Computer Simulations. ACS Omega, 2020, 5, 13023-13033.	1.6	6
311	Elimination of Grain Boundary Defects in Zeolitic Imidazolate Framework ZIFâ€95 Membrane via Solventâ€Free Secondary Growth. Angewandte Chemie, 2021, 133, 25667-25671.	1.6	6
312	Reversible Photoalignment of Azobenzene in the SURMOF HKUST-1. Journal of Physical Chemistry Letters, 2021, 12, 8903-8908.	2.1	6
313	Some problems of activity, selectivity and diffusivity in H-ZSM-5 catalysts. Catalysis Today, 1988, 3, 407-414.	2.2	5
314	NMR investigations on molecular transport in ZSM-5 type zeolites containing structural defects. Catalysis Today, 1988, 3, 493-499.	2.2	5
315	Keramische Membran zur Wasserabtrennung aus LÃ¶sungsmitteln. Chemie-Ingenieur-Technik, 2000, 72, 1167-1173.	0.4	5
316	PrÃparation und Evaluation neuer Hybridâ€Protonenleiter â€“ Teil II: Anorganische Nanoteilchen als Modifikator in NafionÂ®â€Hybridmembranen. Chemie-Ingenieur-Technik, 2007, 79, 2035-2041.	0.4	5
317	Surface permeability on zeolite NaCaA enhanced by layer deposition. Microporous and Mesoporous Materials, 2011, 146, 151-157.	2.2	5
318	Laser directed dynamic hydrogen template deposition of porous Pt@Ag networks. Electrochimica Acta, 2017, 252, 430-437.	2.6	5
319	Hydrogen Purification through a Highly Stable Dualâ€Phase Oxygenâ€Permeable Membrane. Angewandte Chemie, 2021, 133, 5264-5268.	1.6	5
320	Keramik-Membranen mit molekularen Trenneigenschaften - Teil 2: Funktionalisierung keramischer Membranen durch Silylierung. Chemie-Ingenieur-Technik, 1998, 70, 992-997.	0.4	4
321	Oxidative Dehydrierung niederer Alkane in einem selektiven Membranreaktor mit gestufter Sauerstoffzugabe und Inâ€situâ€Wasserstoffoxidation. Chemie-Ingenieur-Technik, 2009, 81, 1591-1597.	0.4	4
322	Plasmamodifizierung von Polybenzimidazol-Polymermembranen fÃƒÂ¼r die PEM-Brennstoffzelle. Chemie-Ingenieur-Technik, 2009, 81, 1911-1919.	0.4	4
323	Neue nanoporÃ¶se Molekularsiebmembranen: Zeolithe contra MOFs â€“ Gewinner und Verlierer. Chemie-Ingenieur-Technik, 2010, 82, 837-847.	0.4	4
324	Eine zweiphasige Keramikmembran mit extrem hohem Wasserstoffâ€Fluss durch Entmischung einer keramischen Vorstufe. Angewandte Chemie, 2016, 128, 11055-11058.	1.6	4

#	Article	IF	Citations
325	Seeding-free synthesis of oriented zeolite LTA membrane on PDI-modified support for dehydration of alcohols. Separation Science and Technology, 2018, 53, 1741-1751.	1.3	4
326	Polymerâ€Stabilized Percolation Membranes Based on Nanosized Zeolitic Imidazolate Frameworks for H₂/CO₂ Separation. ChemNanoMat, 2018, 4, 698-703.	1.5	4
327	Microwave-Assisted Synthesis, Characterization and Modeling of CPO-27-Mg Metal-Organic Framework for Drug Delivery. Molecules, 2021, 26, 426.	1.7	4
328	Adsorption of Aromatics on Silica Gel. Adsorption Science and Technology, 1986, 3, 65-74.	1.5	3
329	Fluorescence ofp-N, N-dimethylaminobenzonitrile incorporated in pores of molecular sieves. Journal of Fluorescence, 1994, 4, 75-77.	1.3	3
330	Hierarchical Nano-structuring of Metal Oxide Catalystsâ€“ Part 1: Influence of Nano-structuring on the Activity of the Catalysts. Chemical Engineering and Technology, 2004, 27, 839-843.	0.9	3
331	Functionalized mesoporous materials used as proton conductive additives for high temperature PEM fuel cell membranes. Studies in Surface Science and Catalysis, 2007, 170, 1540-1545.	1.5	3
332	Zeolite membranes - from Barrers vision to technical applications: new concepts in zeolite membrane R&D. Studies in Surface Science and Catalysis, 2007, 170, 96-109.	1.5	3
333	Diffusion of n-alkanes in zeolites: the benefit of observation over different length scales. Studies in Surface Science and Catalysis, 2007, 170, 981-987.	1.5	3
334	Umgekehrte Brennstoffzelle: Wasserstoffabtrennung aus einem Abgas mithilfe einer kurzgeschlossenen kommerziellen PEMâ€Brennstoffzelle ohne Anlegen einer ÃuÃŸeren Spannung bei Raumtemperatur. Angewandte Chemie, 2015, 127, 7900-7904.	1.6	3
335	Impact of border traps in ultrathin metal-organic framework Cu3(BTC)2 based capacitors. Microporous and Mesoporous Materials, 2019, 277, 136-141.	2.2	3
336	Boosting Dimethylamine Formation Selectivity in a Membrane Reactor by In Situ Water Removal. Industrial & Engineering Chemistry Research, 2022, 61, 307-316.	1.8	3
337	Is freeze-drying an alternative to solvent exchange for the hydration stop of cementitious suspensions?. Cement and Concrete Research, 2022, 159, 106841.	4.6	3
338	Can inorganic membranes compete with organic ones? Perovskite hollow fibres for O2-separation and supported H2-selective zeolite membranes. Desalination, 2006, 199, 365-367.	4.0	2
339	An unusual hydrothermal phase transformation of quartz-type gallium phosphate into zeotype GaPO4-LTA and backwards. Microporous and Mesoporous Materials, 2008, 112, 637-640.	2.2	2
340	Cover Picture: Direct Decomposition of Nitrous Oxide to Nitrogen by Inâ€…Situ Oxygen Removal with a Perovskite Membrane (Angew. Chem. Int. Ed. 16/2009). Angewandte Chemie - International Edition, 2009, 48, 2807-2807.	7.2	1
341	Hellmut G. Karge (1931â€“2013). Microporous and Mesoporous Materials, 2014, 184, 70-71.	2.2	1
342	3.1 Basic Aspects of Membrane Reactors. , 2017, , 1-29.		1

#	Article	IF	Citations
343	Frontispiece: The Interaction of Guest Molecules with Co-MOF-74: A Vis/NIR and Raman Approach. Angewandte Chemie - International Edition, 2018, 57, .	7.2	1
344	Decalin Ring Opening on Heterogeneous Me/Saponite Nanocatalysts (Me = Rh, Ru, and Ir). Industrial & Engineering Chemistry Research, 2021, 60, 7802-7815.	1.8	1
345	Highly Selective CO 2 Conversion to Methanol in a Bifunctional Zeolite Catalytic Membrane Reactor. Angewandte Chemie, 2021, 133, 18437-18442.	1.6	1
346	Controlled methylamine synthesis in a membrane reactor featuring a highly steam selective K+-LTA membrane. Microporous and Mesoporous Materials, 2022, 337, 111920.	2.2	1
347	Testung von Adsorbentien fÃ¼r die Druckwechsel-Adsorption. Chemie-Ingenieur-Technik, 1991, 63, 866-867.	0.4	0
348	Physikalische Chemie 1995. Nachrichten Aus Der Chemie, 1996, 44, 194-202.	0.0	0
349	Buchbesprechung: Leipzig, Einstein, Diffusion. J. KÃrger.. Chemie-Ingenieur-Technik, 2008, 80, 1860-1861.	0.4	0
350	Frontispiece: Inverted Fuel Cell: Roomâ€Temperature Hydrogen Separation from an Exhaust Gas by Using a Commercial Shortâ€Circuited PEM Fuel Cell without Applying any Electrical Voltage. Angewandte Chemie - International Edition, 2015, 54, .	7.2	0
351	Frontispiz: Umgekehrte Brennstoffzelle: Wasserstoffabtrennung aus einem Abgas mithilfe einer kurzgeschlossenen kommerziellen PEMâ€Brennstoffzelle ohne Anlegen einer ÄußEren Spannung bei Raumtemperatur. Angewandte Chemie, 2015, 127, .	1.6	0
352	RÃ¼cktitelbild: Wasserâ€Hochflussmembranen auf Basis der kovalenten organischen GerÃ¼ststruktur COFâ€LZU1 fÃ¼r die Farbstoffabtrennung durch Nanofiltration (Angew. Chem. 15/2018). Angewandte Chemie, 2018, 130, 4170-4170.	1.6	0
353	Frontispiece: Highâ€Flux Highâ€Selectivity Metalâ€“Organic Framework MILâ€160 Membrane for Xylene Isomer Separation by Pervaporation. Angewandte Chemie - International Edition, 2018, 57, .	7.2	0
354	Frontispiz: Hochflussâ€Hochselektivitätsâ€MOFâ€Membran: Geträgerte MILâ€160â€Schicht fÃ¼r die Trennung der Xylolisomere durch Pervaporation. Angewandte Chemie, 2018, 130, .	1.6	0
355	Frontispiz: Vis/NIR- und Raman-Untersuchung der Wechselwirkung von GastmolekÃ¼len mit Co-MOF-74. Angewandte Chemie, 2018, 130, .	1.6	0
356	Molecular Sieves. Zeitschrift Fur Physikalische Chemie, 1999, 212, 119-120.	1.4	0