

# Sankar Nair

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/162285/sankar-nair-publications-by-citations.pdf>

**Version:** 2024-04-25

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

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

163  
papers

9,466  
citations

56  
h-index

92  
g-index

181  
ext. papers

10,518  
ext. citations

8  
avg. IF

6.27  
L-index

#	Paper	IF	Citations
163	A high-performance gas-separation membrane containing submicrometer-sized metal-organic framework crystals. <i>Angewandte Chemie - International Edition</i> , <b>2010</b> , 49, 9863-6	16.4	558
162	Separation membranes. Interfacial microfluidic processing of metal-organic framework hollow fiber membranes. <i>Science</i> , <b>2014</b> , 345, 72-5	33.3	492
161	A titanasilicate molecular sieve with adjustable pores for size-selective adsorption of molecules. <i>Nature</i> , <b>2001</b> , 412, 720-4	50.4	467
160	Exploring the Framework Hydrophobicity and Flexibility of ZIF-8: From Biofuel Recovery to Hydrocarbon Separations. <i>Journal of Physical Chemistry Letters</i> , <b>2013</b> , 4, 3618-3622	6.4	242
159	Efficient calculation of diffusion limitations in metal organic framework materials: a tool for identifying materials for kinetic separations. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 7528-39	16.4	239
158	Alcohol and water adsorption in zeolitic imidazolate frameworks. <i>Chemical Communications</i> , <b>2013</b> , 49, 3245-7	5.8	230
157	Growth, microstructure, and permeation properties of supported zeolite (MFI) films and membranes prepared by secondary growth. <i>Chemical Engineering Science</i> , <b>1999</b> , 54, 3521-3531	4.4	175
156	Finding MOFs for highly selective CO <sub>2</sub> /N <sub>2</sub> adsorption using materials screening based on efficient assignment of atomic point charges. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 4313-23	16.4	165
155	Hybrid Zeolitic Imidazolate Frameworks: Controlling Framework Porosity and Functionality by Mixed-Linker Synthesis. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 1930-1936	9.6	164
154	Quantifying large effects of framework flexibility on diffusion in MOFs: CH <sub>4</sub> and CO <sub>2</sub> in ZIF-8. <i>ChemPhysChem</i> , <b>2012</b> , 13, 3449-52	3.2	164
153	Continuous polycrystalline zeolitic imidazolate framework-90 membranes on polymeric hollow fibers. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 10615-8	16.4	156
152	Highly tunable molecular sieving and adsorption properties of mixed-linker zeolitic imidazolate frameworks. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 4191-7	16.4	155
151	Membranes from nanoporous 1D and 2D materials: A review of opportunities, developments, and challenges. <i>Chemical Engineering Science</i> , <b>2013</b> , 104, 908-924	4.4	155
150	Sonication-induced Ostwald ripening of ZIF-8 nanoparticles and formation of ZIF-8/polymer composite membranes. <i>Microporous and Mesoporous Materials</i> , <b>2012</b> , 158, 292-299	5.3	153
149	Transport properties of alumina-supported MFI membranes made by secondary (seeded) growth. <i>Microporous and Mesoporous Materials</i> , <b>2000</b> , 38, 61-73	5.3	152
148	Phenomenology of the Growth of Single-Walled Aluminosilicate and Aluminogermanate Nanotubes of Precise Dimensions. <i>Chemistry of Materials</i> , <b>2005</b> , 17, 4900-4909	9.6	143
147	CO <sub>2</sub> /CH <sub>4</sub> permeation in high zeolite 4A loading mixed matrix membranes. <i>Journal of Membrane Science</i> , <b>2011</b> , 367, 197-203	9.6	140

146	Fabrication of Polymer/Selective-Flake Nanocomposite Membranes and Their Use in Gas Separation. <i>Chemistry of Materials</i> , <b>2004</b> , 16, 3838-3845	9.6	138
145	Pervaporation performance comparison of hybrid membranes filled with two-dimensional ZIF-L nanosheets and zero-dimensional ZIF-8 nanoparticles. <i>Journal of Membrane Science</i> , <b>2017</b> , 523, 185-196	9.6	132
144	Temperature and Loading-Dependent Diffusion of Light Hydrocarbons in ZIF-8 as Predicted Through Fully Flexible Molecular Simulations. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 15760-711	16.4	121
143	Adsorption and Diffusion of Small Alcohols in Zeolitic Imidazolate Frameworks ZIF-8 and ZIF-90. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 3169-3176	3.8	111
142	Tunable CO <sub>2</sub> Adsorbents by Mixed-Linker Synthesis and Postsynthetic Modification of Zeolitic Imidazolate Frameworks. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 8198-8207	3.8	106
141	A highly crystalline layered silicate with three-dimensionally microporous layers. <i>Nature Materials</i> , <b>2003</b> , 2, 53-8	27	106
140	Polyamide thin film composite nanofiltration membrane modified with acyl chlorided graphene oxide. <i>Journal of Membrane Science</i> , <b>2017</b> , 535, 208-220	9.6	105
139	Facile high-yield solvothermal deposition of inorganic nanostructures on zeolite crystals for mixed matrix membrane fabrication. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 14662-3	16.4	101
138	Separation of close-boiling hydrocarbon mixtures by MFI and FAU membranes made by secondary growth. <i>Microporous and Mesoporous Materials</i> , <b>2001</b> , 48, 219-228	5.3	96
137	Synthesis and Structure Determination of ETS-4 Single Crystals. <i>Chemistry of Materials</i> , <b>2001</b> , 13, 4247-4254	9.6	95
136	Layered silicates by swelling of AMH-3 and nanocomposite membranes. <i>Angewandte Chemie - International Edition</i> , <b>2008</b> , 47, 552-5	16.4	93
135	High-throughput screening of metal-organic frameworks for CO <sub>2</sub> separation. <i>ACS Combinatorial Science</i> , <b>2012</b> , 14, 263-7	3.9	91
134	ZIF-8 Membranes via Interfacial Microfluidic Processing in Polymeric Hollow Fibers: Efficient Propylene Separation at Elevated Pressures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 25337-42	9.5	89
133	Propane dehydrogenation catalyzed by gallosilicate MFI zeolites with perturbed acidity. <i>Journal of Catalysis</i> , <b>2017</b> , 345, 113-123	7.3	86
132	Mixed-linker zeolitic imidazolate framework mixed-matrix membranes for aggressive CO <sub>2</sub> separation from natural gas. <i>Microporous and Mesoporous Materials</i> , <b>2014</b> , 192, 43-51	5.3	82
131	Structural and Mechanistic Differences in Mixed-Linker Zeolitic Imidazolate Framework Synthesis by Solvent Assisted Linker Exchange and de Novo Routes. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 5906-5915	16.4	81
130	MOF stability and gas adsorption as a function of exposure to water, humid air, SO <sub>2</sub> , and NO <sub>2</sub> . <i>Microporous and Mesoporous Materials</i> , <b>2013</b> , 173, 86-91	5.3	81
129	Propane Dehydrogenation over Alumina-Supported Iron/Phosphorus Catalysts: Structural Evolution of Iron Species Leading to High Activity and Propylene Selectivity. <i>ACS Catalysis</i> , <b>2016</b> , 6, 5673-5683	13.1	79

128	Single-walled aluminosilicate nanotube/poly(vinyl alcohol) nanocomposite membranes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2012</b> , 4, 965-76	9.5	79
127	A High-Performance Gas-Separation Membrane Containing Submicrometer-Sized Metal-Organic Framework Crystals. <i>Angewandte Chemie</i> , <b>2010</b> , 122, 10059-10062	3.6	79
126	Structure of Strontium Ion-Exchanged ETS-4 Microporous Molecular Sieves. <i>Chemistry of Materials</i> , <b>2000</b> , 12, 1857-1865	9.6	79
125	Fluidic Processing of High-Performance ZIF-8 Membranes on Polymeric Hollow Fibers: Mechanistic Insights and Microstructure Control. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5011-5018	15.6	79
124	Computational identification of a metal organic framework for high selectivity membrane-based CO <sub>2</sub> /CH <sub>4</sub> separations: Cu(hfipbb)(H <sub>2</sub> hfipbb) <sub>0.5</sub> . <i>Physical Chemistry Chemical Physics</i> , <b>2009</b> , 11, 11389-94	3.6	77
123	Short, highly ordered, single-walled mixed-oxide nanotubes assemble from amorphous nanoparticles. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 6820-6	16.4	77
122	Pore size analysis of >250,000 hypothetical zeolites. <i>Physical Chemistry Chemical Physics</i> , <b>2011</b> , 13, 5053-60	6.0	75
121	Modified Mesoporous Silica Gas Separation Membranes on Polymeric Hollow Fibers. <i>Chemistry of Materials</i> , <b>2011</b> , 23, 3025-3028	9.6	75
120	Dehydration, dehydroxylation, and rehydroxylation of single-walled aluminosilicate nanotubes. <i>ACS Nano</i> , <b>2010</b> , 4, 4897-907	16.7	74
119	Nanoporous layered silicate AMH-3/cellulose acetate nanocomposite membranes for gas separations. <i>Journal of Membrane Science</i> , <b>2013</b> , 441, 129-136	9.6	72
118	Interactions of SO <sub>2</sub> -Containing Acid Gases with ZIF-8: Structural Changes and Mechanistic Investigations. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 27221-27229	3.8	71
117	Direct synthesis of single-walled aminoaluminosilicate nanotubes with enhanced molecular adsorption selectivity. <i>Nature Communications</i> , <b>2014</b> , 5, 3342	17.4	70
116	Self-diffusion of water and simple alcohols in single-walled aluminosilicate nanotubes. <i>ACS Nano</i> , <b>2009</b> , 3, 1548-56	16.7	67
115	Formation of single-walled aluminosilicate nanotubes from molecular precursors and curved nanoscale intermediates. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 5397-412	16.4	65
114	Single-Walled Aluminosilicate Nanotubes with Organic-Modified Interiors. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 7676-7685	3.8	65
113	Shaping single-walled metal oxide nanotubes from precursors of controlled curvature. <i>Nano Letters</i> , <b>2012</b> , 12, 827-32	11.5	64
112	Catalytic propane dehydrogenation over In <sub>2</sub> O <sub>3</sub> /Zn <sub>2</sub> O <sub>3</sub> mixed oxides. <i>Applied Catalysis A: General</i> , <b>2015</b> , 498, 167-175	5.1	62
111	Synergistic Effects of Water and SO <sub>2</sub> on Degradation of MIL-125 in the Presence of Acid Gases. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 27230-27240	3.8	59

110	Hierarchical Ga-MFI Catalysts for Propane Dehydrogenation. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 7213-7222	9.6	58
109	Porous layered oxide/Nafion <sup>®</sup> nanocomposite membranes for direct methanol fuel cell applications. <i>Microporous and Mesoporous Materials</i> , <b>2009</b> , 118, 427-434	5.3	58
108	Controlling nanotube dimensions: correlation between composition, diameter, and internal energy of single-walled mixed oxide nanotubes. <i>ACS Nano</i> , <b>2007</b> , 1, 393-402	16.7	58
107	Functionalization of the Internal Surface of Pure-Silica MFI Zeolite with Aliphatic Alcohols. <i>Journal of Physical Chemistry C</i> , <b>2008</b> , 112, 3543-3551	3.8	51
106	Strain energy minimum and vibrational properties of single-walled aluminosilicate nanotubes. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	51
105	Butane isomer transport properties of 6FDA/AM and MFI/6FDA/AM mixed matrix membranes. <i>Journal of Membrane Science</i> , <b>2009</b> , 343, 157-163	9.6	50
104	Acid Gas Stability of Zeolitic Imidazolate Frameworks: Generalized Kinetic and Thermodynamic Characteristics. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 4089-4101	9.6	49
103	Heteroepitaxial Growth of a Zeolite T.W. and T.O. are grateful to H. Tsunakawa of the High Voltage Electron Microscope Laboratory, University of Tokyo (UT), and Prof. Y. Ikuhara, Engineering Research Institute, UT, for the 400-kV SAED experiments and their analyses, respectively. H. Shiga, T. Hayashi and T. Shiraki are acknowledged for preliminary experiments. This work was supported	16.4	48
102	Prediction of Water Adsorption in Copper-Based Metal-Organic Frameworks Using Force Fields Derived from Dispersion-Corrected DFT Calculations. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 7519-7525	3.8	46
101	Modeling molecular transport in composite membranes with tubular fillers. <i>Journal of Membrane Science</i> , <b>2011</b> , 381, 50-63	9.6	46
100	Water in Single-Walled Aluminosilicate Nanotubes: Diffusion and Adsorption Properties. <i>Journal of Physical Chemistry C</i> , <b>2008</b> , 112, 15367-15374	3.8	46
99	Continuous Zeolite MFI Membranes Fabricated from 2D MFI Nanosheets on Ceramic Hollow Fibers. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 8201-8205	16.4	45
98	A Mesoporous Cobalt Aluminate Spinel Catalyst for Nonoxidative Propane Dehydrogenation. <i>ChemCatChem</i> , <b>2017</b> , 9, 3330-3337	5.2	44
97	Sonochemical Synthesis and Characterization of Submicrometer Crystals of the Metal-Organic Framework Cu[(hfpbb)(H <sub>2</sub> hfpbb) <sub>0.5</sub> ]. <i>Crystal Growth and Design</i> , <b>2011</b> , 11, 4505-4510	3.5	44
96	Solvothermal deposition and characterization of magnesium hydroxide nanostructures on zeolite crystals. <i>Microporous and Mesoporous Materials</i> , <b>2011</b> , 139, 120-129	5.3	43
95	A study of heat-treatment induced framework contraction in strontium-ETS-4 by powder neutron diffraction and vibrational spectroscopy. <i>Journal of the American Chemical Society</i> , <b>2001</b> , 123, 12781-90	16.4	42
94	Thin Hydrogen-Selective SAPO-34 Zeolite Membranes for Enhanced Conversion and Selectivity in Propane Dehydrogenation Membrane Reactors. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 4397-4402	9.6	41
93	Propane Dehydrogenation over In <sub>2</sub> O <sub>3</sub> /Ga <sub>2</sub> O <sub>3</sub> /Al <sub>2</sub> O <sub>3</sub> Mixed Oxides. <i>ChemCatChem</i> , <b>2016</b> , 8, 214-221	5.2	41

92	Defect Structures in Aluminosilicate Single-Walled Nanotubes: A Solid-State Nuclear Magnetic Resonance Investigation. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 17149-17157	3.8	40
91	Flexibility of Ordered Surface Hydroxyls Influences the Adsorption of Molecules in Single-Walled Aluminosilicate Nanotubes. <i>Journal of Physical Chemistry Letters</i> , <b>2010</b> , 1, 1235-1240	6.4	40
90	Structure Elucidation of Mixed-Linker Zeolitic Imidazolate Frameworks by Solid-State (1)H CRAMPS NMR Spectroscopy and Computational Modeling. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 7325-36	16.4	39
89	Rigorous calculations of permeation in mixed-matrix membranes: Evaluation of interfacial equilibrium effects and permeability-based models. <i>Journal of Membrane Science</i> , <b>2013</b> , 448, 160-169	9.6	38
88	Epitaxially grown layered MFI-bulk MFI hybrid zeolitic materials. <i>ACS Nano</i> , <b>2012</b> , 6, 9978-88	16.7	38
87	Computational Identification and Experimental Evaluation of Metal-Organic Frameworks for Xylene Enrichment. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 12075-12082	3.8	37
86	Liquid-Phase Multicomponent Adsorption and Separation of Xylene Mixtures by Flexible MIL-53 Adsorbents. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 386-397	3.8	36
85	Thin film nanocomposite membrane containing zeolitic imidazolate framework-8 via interfacial polymerization for highly permeable nanofiltration. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , <b>2018</b> , 83, 159-167	5.3	36
84	Aziridine-Functionalized Mesoporous Silica Membranes on Polymeric Hollow Fibers: Synthesis and Single-Component CO <sub>2</sub> and N <sub>2</sub> Permeation Properties. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2015</b> , 54, 4407-4413	3.9	35
83	Structure-Property Relationships of Inorganically Surface-Modified Zeolite Molecular Sieves for Nanocomposite Membrane Fabrication. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 9636-9645	3.8	35
82	DMOF-1 as a Representative MOF for SO <sub>2</sub> Adsorption in Both Humid and Dry Conditions. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 23493-23500	3.8	35
81	Krypton-xenon separation properties of SAPO-34 zeolite materials and membranes. <i>AIChE Journal</i> , <b>2017</b> , 63, 761-769	3.6	34
80	Diffusion of Tetrafluoromethane in Single-Walled Aluminosilicate Nanotubes: Pulsed Field Gradient NMR and Molecular Dynamics Simulations. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 21350-21355	3.8	34
79	Osmotic ensemble methods for predicting adsorption-induced structural transitions in nanoporous materials using molecular simulations. <i>Journal of Chemical Physics</i> , <b>2011</b> , 134, 184103	3.9	33
78	A generalized kinetic model for the formation and growth of single-walled metal oxide nanotubes. <i>Chemical Engineering Science</i> , <b>2013</b> , 90, 200-212	4.4	31
77	Butanol Separation from Humid CO <sub>2</sub> -Containing Multicomponent Vapor Mixtures by Zeolitic Imidazolate Frameworks. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2017</b> , 5, 9467-9476	8.3	30
76	Gas Adsorption Characteristics of Metal-Organic Frameworks via Quartz Crystal Microbalance Techniques. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 15313-15321	3.8	30
75	Zeolitic Imidazolate Framework Membranes Supported on Macroporous Carbon Hollow Fibers by Fluidic Processing Techniques. <i>Advanced Materials Interfaces</i> , <b>2017</b> , 4, 1700080	4.6	29

74	Graphene oxide membranes for ion separation: Detailed studies on the effects of fabricating conditions. <i>Applied Surface Science</i> , <b>2018</b> , 459, 185-193	6.7	29
73	The Location of o- and m-Xylene in Silicalite by Powder X-ray Diffraction. <i>Journal of Physical Chemistry B</i> , <b>2000</b> , 104, 8982-8988	3.4	29
72	Synthesis, characterization, and tunable adsorption and diffusion properties of hybrid ZIF-7-90 frameworks. <i>AIChE Journal</i> , <b>2016</b> , 62, 525-537	3.6	29
71	Continuous Polycrystalline Zeolitic Imidazolate Framework-90 Membranes on Polymeric Hollow Fibers. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 10767-10770	3.6	28
70	Ion-Exchanged SAPO-34 Membranes for Krypton-Xenon Separation: Control of Permeation Properties and Fabrication of Hollow Fiber Membranes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 6361-6368	9.5	27
69	A Lasagna-Inspired Nanoscale ZnO Anode Design for High-Energy Rechargeable Aqueous Batteries. <i>ACS Applied Energy Materials</i> , <b>2018</b> , 1, 6345-6351	6.1	27
68	Membranes for Kraft black liquor concentration and chemical recovery: Current progress, challenges, and opportunities. <i>Separation Science and Technology</i> , <b>2017</b> , 52, 1070-1094	2.5	25
67	Reactive Adsorption of Humid SO <sub>2</sub> on Metal-Organic Framework Nanosheets. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 10413-10422	3.8	25
66	Translational dynamics of water in a nanoporous layered silicate. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	25
65	All-Nanoporous Hybrid Membranes: Redefining Upper Limits on Molecular Separation Properties. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 236-239	16.4	25
64	Engineering Porous Organic Cage Crystals with Increased Acid Gas Resistance. <i>Chemistry - A European Journal</i> , <b>2016</b> , 22, 10743-7	4.8	24
63	Graphene oxide nanofiltration membranes for desalination under realistic conditions. <i>Nature Sustainability</i> , <b>2021</b> , 4, 402-408	22.1	23
62	Rotary heat exchanger performance with axial heat dispersion. <i>International Journal of Heat and Mass Transfer</i> , <b>1998</b> , 41, 2857-2864	4.9	22
61	Layered silicate by proton exchange and swelling of AMH-3. <i>Microporous and Mesoporous Materials</i> , <b>2008</b> , 115, 75-84	5.3	22
60	Stability of Zeolitic Imidazolate Frameworks in NO <sub>2</sub> . <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 2336-2346	3.8	22
59	Polymer translocation in solid-state nanopores: dependence of scaling behavior on pore dimensions and applied voltage. <i>Journal of Chemical Physics</i> , <b>2012</b> , 136, 065105	3.9	21
58	One-Step Synthesis of Zeolite Membranes Containing Catalytic Metal Nanoclusters. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 24671-81	9.5	20
57	Interactions on External MOF Surfaces: Desorption of Water and Ethanol from CuBDC Nanosheets. <i>Langmuir</i> , <b>2017</b> , 33, 10153-10160	4	20

56	A Computational Study of Gas Molecule Transport in a Polymer/Nanoporous Layered Silicate Nanocomposite Membrane Material. <i>Journal of Physical Chemistry C</i> , <b>2007</b> , 111, 2017-2024	3.8	20
55	Graphene Oxide Membranes in Extreme Operating Environments: Concentration of Kraft Black Liquor by Lignin Retention. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2017</b> , 5, 1002-1009	8.3	19
54	Silylated mesoporous silica membranes on polymeric hollow fiber supports: synthesis and permeation properties. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2014</b> , 6, 17877-86	9.5	18
53	Swelling, functionalization, and structural changes of the nanoporous layered silicates AMH-3 and MCM-22. <i>Langmuir</i> , <b>2011</b> , 27, 7892-901	4	18
52	Highly Selective SSZ-13 Zeolite Hollow Fiber Membranes by Ultraviolet Activation at Near-Ambient Temperature. <i>ChemNanoMat</i> , <b>2019</b> , 5, 61-67	3.5	17
51	Zeolite-grown epitaxially on SSZ-31 nanofibers. <i>Chemical Communications</i> , <b>1999</b> , 921-922	5.8	17
50	Material properties and operating configurations of membrane reactors for propane dehydrogenation. <i>AIChE Journal</i> , <b>2015</b> , 61, 922-935	3.6	16
49	Effects of Open Metal Site Availability on Adsorption Capacity and Olefin/Paraffin Selectivity in the Metal-Organic Framework Cu <sub>3</sub> (BTC) <sub>2</sub> . <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2016</b> , 55, 5043-5053	3.9	16
48	Recovery of Acid-Gas-Degraded Zeolitic Imidazolate Frameworks by Solvent-Assisted Crystal Redemption (SACRed). <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 34597-34602	9.5	15
47	Preparation and Gas Adsorption Characteristics of Zeolite MFI Crystals with Organic-Functionalized Interiors. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 19640-19646	3.8	15
46	Solution-Processed Ultrathin Aluminosilicate Nanotube/Poly(vinyl alcohol) Composite Membranes with Partial Alignment of Nanotubes. <i>ChemNanoMat</i> , <b>2015</b> , 1, 102-108	3.5	14
45	Characterization of HKUST-1 Crystals and Their Application to MEMS Microcantilever Array Sensors. <i>ECS Transactions</i> , <b>2010</b> , 33, 229-238	1	14
44	Infrared reflectance measurements of zeolite film thickness, refractive index and other characteristics. <i>Microporous and Mesoporous Materials</i> , <b>2003</b> , 58, 81-89	5.3	14
43	Effects of composition and phonon scattering mechanisms on thermal transport in MFI zeolite films. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 053523	2.5	13
42	Modeling and process simulation of hollow fiber membrane reactor systems for propane dehydrogenation. <i>AIChE Journal</i> , <b>2017</b> , 63, 4519-4531	3.6	12
41	Continuous Zeolite MFI Membranes Fabricated from 2D MFI Nanosheets on Ceramic Hollow Fibers. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 8285-8289	3.6	12
40	Ion exchange of zeolite membranes by a vacuum flow-through technique. <i>Microporous and Mesoporous Materials</i> , <b>2015</b> , 203, 170-177	5.3	12
39	Purification of 2,5-Dimethylfuran from n-Butanol Using Defect-Engineered Metal-Organic Frameworks. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2018</b> , 6, 7931-7939	8.3	12



38	Seeded growth, silylation, and organic/water separation properties of MCM-48 membranes. <i>Journal of Membrane Science</i> , <b>2013</b> , 427, 293-302	9.6	12
37	All-Nanoporous Hybrid Membranes: Redefining Upper Limits on Molecular Separation Properties. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 242-245	3.6	12
36	Database of Computation-Ready 2D Zeolitic Slabs. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 353-364	9.6	12
35	Layered Silicates by Swelling of AMH-3 and Nanocomposite Membranes. <i>Angewandte Chemie</i> , <b>2008</b> , 120, 562-565	3.6	11
34	Methyl rotational tunneling dynamics of p-xylene confined in a crystalline zeolite host. <i>Journal of Chemical Physics</i> , <b>2004</b> , 121, 4810-9	3.9	11
33	Molecular Dynamics Investigation of Surface Resistances in Zeolite Nanosheets. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 15241-15252	3.8	10
32	High-Performance Graphene Oxide Nanofiltration Membranes for Black Liquor Concentration. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2019</b> , 7, 14915-14923	8.3	10
31	Geometry of nanopore devices fabricated by electron beam lithography: Simulations and experimental comparisons. <i>Microelectronic Engineering</i> , <b>2013</b> , 112, 149-156	2.5	10
30	Heteroepitaxial Growth of a Zeolite. <i>Angewandte Chemie</i> , <b>2001</b> , 113, 1103-1105	3.6	10
29	Scalable One-Step Gel Conversion Route to High-Performance CHA Zeolite Hollow Fiber Membranes and Modules for CO <sub>2</sub> Separation. <i>Energy Technology</i> , <b>2019</b> , 7, 1900494	3.5	9
28	All-Nanoporous Hybrid Membranes: Incorporating Zeolite Nanoparticles and Nanosheets with Zeolitic Imidazolate Framework Matrices. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 27368-27377 <sup>9.5</sup>	9.5	9
27	PVDF/Cu-BTC composite membranes for dye separation. <i>Fibers and Polymers</i> , <b>2017</b> , 18, 1250-1254	2	8
26	Separation and Purification of Furans from n-Butanol by Zeolitic Imidazole Frameworks: Multicomponent Adsorption Behavior and Simulated Moving Bed Process Design. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2019</b> , 7, 16560-16568	8.3	7
25	Formation of Mg(OH) <sub>2</sub> nanowhiskers on LTA zeolite surfaces using a sol-gel method. <i>Journal of Sol-Gel Science and Technology</i> , <b>2011</b> , 60, 189-197	2.3	6
24	Effects of nonframework metal cations and phonon scattering mechanisms on the thermal transport properties of polycrystalline zeolite LTA films. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 063518	2.5	6
23	Effect of Si/Al Ratio on the Catalytic Activity of Two-Dimensional MFI Nanosheets in Aromatic Alkylation and Alcohol Etherification. <i>ChemCatChem</i> , <b>2019</b> , 11, 4548-4557	5.2	5
22	The rheology of suspensions of porous zeolite particles in polymer solutions. <i>Rheologica Acta</i> , <b>2014</b> , 53, 133-141	2.3	5
21	Polymer translocation in solid-state nanopores: Dependence on hydrodynamic interactions and polymer configuration. <i>Chemical Physics</i> , <b>2013</b> , 425, 1-13	2.3	5

20	Single-walled zeolitic nanotubes.. <i>Science</i> , <b>2022</b> , 375, 62-66	33.3	5
19	Single-Step Scalable Fabrication of Zeolite MFI Hollow Fiber Membranes for Hydrocarbon Separations. <i>Advanced Materials Interfaces</i> , <b>2020</b> , 7, 2000926	4.6	5
18	Synthesizing New Hybrid Zeolitic Imidazolate Frameworks by Controlled Demolition and Reconstruction <b>2019</b> , 1, 447-451		4
17	Aromatics/Alkanes separation: Simulated moving bed process model development by a concurrent approach and its validation in a mini-plant. <i>Separation and Purification Technology</i> , <b>2019</b> , 215, 410-421	8.3	4
16	Similarities in Recalcitrant Structures of Industrial Non-Kraft and Kraft Lignin. <i>ChemSusChem</i> , <b>2020</b> , 13, 4624-4632	8.3	4
15	Concentration Profiling of a Molecular Sieve Membrane by Step-Scan Photoacoustic Spectroscopy. <i>Journal of Physical Chemistry B</i> , <b>2004</b> , 108, 8766-8769	3.4	4
14	Quantitative Correlations for the Durability of Zeolitic Imidazolate Frameworks in Humid SO <sub>2</sub> . <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 245-252	3.9	4
13	An Accurate DNA Sensing and Diagnosis Methodology Using Fabricated Silicon Nanopores. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , <b>2006</b> , 53, 2377-2383		3
12	Synthesis and Properties of Zeolitic Membranes <b>2003</b> ,		3
11	Washing kinetics of pollution-preventing lithographic inks. <i>Chemical Engineering Science</i> , <b>2000</b> , 55, 1921-1923	4.2	3
10	Separation of C <sub>2</sub> to C <sub>4</sub> hydrocarbons from methane by zeolite MFI hollow fiber membranes fabricated from 2D nanosheets. <i>AIChE Journal</i> , <b>2021</b> , 67,	3.6	3
9	Spatially resolved in situ measurements of the transport of organic molecules in a polycrystalline nanoporous membrane. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 151912	3.4	2
8	AEL Zeolite Nanosheet-Polyamide Nanocomposite Membranes on Alumina Hollow Fibers with Enhanced Pervaporation Properties. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2020</b> , 59, 14789-14796	3.9	2
7	Detailed total scattering analysis of disorder in ZIF-8. <i>Journal of Applied Crystallography</i> , <b>2021</b> , 54, 759-767	3.7	2
6	Engineered Nanopores <b>2008</b> , 233-250		2
5	Origins of Acid-Gas Stability Behavior in Zeolitic Imidazolate Frameworks: The Unique High Stability of ZIF-71. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 18061-18072	16.4	1
4	Separation and Purification of 2,5-Dimethylfuran: Process Design and Comparative Technoeconomic and Sustainability Evaluation of Simulated Moving Bed Adsorption and Conventional Distillation. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 12482-12492	8.3	0
3	The Effects of Material Composition on the Thermal Conductivity of Zeolite MFI <b>2007</b> , 625		

2 Modeling Lattice Dynamics and Heat Capacities of Zeolites **2006**, 415

1 Synthesis of Polycrystalline Zeolite Films and Thermal Conductivity Measurements by a 3-Omega Method **2004**, 91