Michael Tsapatsis

List of Publications by Year
in descending order

245 papers	17,053 citations	13068 68 h-index	16605 123 g-index
259 all docs	259 docs citations	259 times ranked	11709 citing authors

#	Article	IF	Citations
1	Merocyanine 540 as an optical probe of transmembrane electrical activity in the heart. Science, 2003, 191, 485-487.	6.0	987
2	Synthesis of Self-Pillared Zeolite Nanosheets by Repetitive Branching. Science, 2012, 336, 1684-1687.	6.0	655
3	Dispersible Exfoliated Zeolite Nanosheets and Their Application as a Selective Membrane. Science, 2011, 334, 72-75.	6.0	601
4	Hierarchical nanofabricationÂofÂmicroporous crystals with ordered mesoporosity. Nature Materials, 2008, 7, 984-991.	13.3	553
5	A titanosilicate molecular sieve with adjustable pores for size-selective adsorption of molecules. Nature, 2001, 412, 720-724.	13.7	546
6	Ultra-selective high-flux membranes from directly synthesized zeolite nanosheets. Nature, 2017, 543, 690-694.	13.7	446
7	Hydrogen Sulfide Capture: From Absorption in Polar Liquids to Oxide, Zeolite, and Metalâ€“Organic Framework Adsorbents and Membranes. Chemical Reviews, 2017, 117, 9755-9803.	23.0	434
8	Mechanistic principles of nanoparticle evolution to zeolite crystals. Nature Materials, 2006, 5, 400-408.	13.3	416
9	Microporous Metal Organic Framework Membrane on Porous Support Using the Seeded Growth Method. Chemistry of Materials, 2009, 21, 4920-4924.	3.2	340
10	Zeolitic imidazolate framework membranes made by ligand-induced permselectivation. Science, 2018, 361, 1008-1011.	6.0	324
11	Hierarchical Nanomanufacturing: From Shaped Zeolite Nanoparticles to Highâ€Performance Separation Membranes. Angewandte Chemie - International Edition, 2007, 46, 7560-7573.	7.2	323
12	Grain Boundary Defect Elimination in a Zeolite Membrane by Rapid Thermal Processing. Science, 2009, 325, 590-593.	6.0	289
13	Hydrothermal Synthesis of Zeolites with Three-Dimensionally Ordered Mesoporous-Imprinted Structure. Journal of the American Chemical Society, 2011, 133, 12390-12393.	6.6	266
14	Preferentially oriented submicron silicalite membranes. AICHE Journal, 1996, 42, 3020-3029.	1.8	244
15	Layer Structure Preservation during Swelling, Pillaring, and Exfoliation of a Zeolite Precursor. Journal of the American Chemical Society, 2008, 130, 1507-1516.	6.6	240
16	Separation of Xylene Isomer Vapors with Oriented MFI Membranes Made by Seeded Growth. Industrial & Engineering Chemistry Research, 2001, 40, 544-552.	1.8	227
17	Synthesis and characterization of oriented MFI membranes prepared by secondary growth. AICHE Journal, 1998, 44, 1903-1913.	1.8	212
18	On the Preferred Orientation and Microstructural Manipulation of Molecular Sieve Films Prepared by Secondary Growth. Chemistry of Materials, 1998, 10, 2497-2504.	3.2	207

#	Article	IF	Citations
19	Oriented MFI Membranes by Gelâ€Less Secondary Growth of Subâ€100 nm MFIâ€Nanosheet Seed Layers. Advanced Materials, 2015, 27, 3243-3249.	11.1	182
20	Transport properties of alumina-supported MFI membranes made by secondary (seeded) growth. Microporous and Mesoporous Materials, 2000, 38, 61-73.	2.2	173
21	One-Pot Synthesis of 5-(Ethoxymethyl)furfural from Glucose Using Sn-BEA and Amberlyst Catalysts. Industrial & Engineering Chemistry Research, 2012, 51, 5364-5366.	1.8	168
22	Structure of the Silica Phase Extracted from Silica/(TPA)OH Solutions Containing Nanoparticles. Journal of Physical Chemistry B, 2003, 107, 10006-10016.	1.2	164
23	Zeolite (MFI) Crystal Morphology Control Using Organic Structure-Directing Agents. Chemistry of Materials, 2004, 16, 5697-5705.	3.2	164
24	Fabrication of Polymer/Selective-Flake Nanocomposite Membranes and Their Use in Gas Separation. Chemistry of Materials, 2004, 16, 3838-3845.	3.2	152
25	Characterization of Zeolite L Nanoclusters. Chemistry of Materials, 1995, 7, 1734-1741.	3.2	149
26	Uniformlya-Oriented MFI Zeolite Films by Secondary Growth. Angewandte Chemie - International Edition, 2006, 45, 1154-1158.	7.2	138
27	Selfâ€Pillared, Singleâ€Unitâ€Cell Snâ€MFI Zeolite Nanosheets and Their Use for Glucose and Lactose Isomerization. Angewandte Chemie - International Edition, 2015, 54, 10848-10851.	7.2	138
28	Continuous production of 5-hydroxymethylfurfural from fructose: a design case study. Energy and Environmental Science, 2010, 3, 1560.	15.6	136
29	paraâ€Xylene Ultraâ€selective Zeolite MFI Membranes Fabricated from Nanosheet Monolayers at the Airâ€“Water Interface. Angewandte Chemie - International Edition, 2018, 57, 480-485.	7.2	130
30	Synthesis of hydrogen permselective silicon dioxide, titanium dioxide, aluminum oxide, and boron oxide membranes from the chloride precursors. Industrial & Engineering Chemistry Research, 1991, 30, 2152-2159.	1.8	128
31	TraPPE-zeo: Transferable Potentials for Phase Equilibria Force Field for All-Silica Zeolites. Journal of Physical Chemistry C, 2013, 117, 24375-24387.	1.5	124
32	A highly crystalline layered silicate with three-dimensionally microporous layers. Nature Materials, 2003, 2, 53-58.	13.3	120
33	Renewable pâ€Xylene from 2,5â€Dimethylfuran and Ethylene Using Phosphorusâ€Containing Zeolite Catalysts. ChemCatChem, 2017, 9, 398-402.	1.8	118
34	Tin-containing zeolite for the isomerization of cellulosic sugars. Microporous and Mesoporous Materials, 2012, 153, 55-58.	2.2	116
35	On the direct synthesis of Cu(BDC) MOF nanosheets and their performance in mixed matrix membranes. Journal of Membrane Science, 2018, 549, 312-320.	4.1	116
36	Finned zeolite catalysts. Nature Materials, 2020, 19, 1074-1080.	13.3	116

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37	Synthesis and Structure Determination of ETS-4 Single Crystals. Chemistry of Materials, 2001, 13, 4247-4254.	3.2	115
38	Catalytic Behavior of BrÃ¸nsted Acid Sites in MWW and MFI Zeolites with Dual Meso- and Microporosity. ACS Catalysis, 2011, 1, 7-17.	5.5	113
39	Nanoparticles in Lysineâ˜Silica Sols. Chemistry of Materials, 2006, 18, 5814-5816.	3.2	110
40	A Structural Resolution Cryo-TEM Study of the Early Stages of MFI Growth. Journal of the American Chemical Society, 2008, 130, 17284-17286.	6.6	110
41	Layered Silicates by Swelling of AMHâ€3 and Nanocomposite Membranes. Angewandte Chemie - International Edition, 2008, 47, 552-555.	7.2	107
42	Toward High-Throughput Zeolite Membranes. Science, 2011, 334, 767-768.	6.0	105
43	On the Synthesis and Adsorption Properties of Singleâ€Unitâ€Cell Hierarchical Zeolites Made by Rotational Intergrowths. Advanced Functional Materials, 2014, 24, 201-208.	7.8	101
44	2â€dimensional zeolites. AICHE Journal, 2014, 60, 2374-2381.	1.8	101
45	Openâ€Pore Twoâ€Dimensional MFI Zeolite Nanosheets for the Fabrication of Hydrocarbonâ€Isomerâ€Selective Membranes on Porous Polymer Supports. Angewandte Chemie - International Edition, 2016, 55, 7184-7187.	7.2	100
46	Surface Structure of Zeolite (MFI) Crystals. Chemistry of Materials, 2004, 16, 5226-5232.	3.2	95
47	Discovery of optimal zeolites for challenging separations and chemical transformations using predictive materials modeling. Nature Communications, 2015, 6, 5912.	5.8	94
48	Synthesis of Porous Inorganic Membranes. MRS Bulletin, 1999, 24, 30-35.	1.7	92
49	Adsorption of fermentation inhibitors from lignocellulosic biomass hydrolyzates for improved ethanol yield and value-added product recovery. Microporous and Mesoporous Materials, 2009, 122, 143-148.	2.2	92
50	Oriented Molecular Sieve Membranes by Heteroepitaxial Growth. Journal of the American Chemical Society, 2002, 124, 12966-12968.	6.6	91
51	Sub-40 nm Zeolite Suspensions via Disassembly of Three-Dimensionally Ordered Mesoporous-Imprinted Silicalite-1. Journal of the American Chemical Society, 2011, 133, 493-502.	6.6	91
52	One-dimensional intergrowths in two-dimensional zeolite nanosheets and their effect on ultra-selective transport. Nature Materials, 2020, 19, 443-449.	13.3	91
53	On the Rotational Intergrowth of Hierarchical FAU/EMT Zeolites. Angewandte Chemie - International Edition, 2014, 53, 9456-9461.	7.2	90
54	Challenges of and Insights into Acid-Catalyzed Transformations of Sugars. Journal of Physical Chemistry C, 2014, 118, 22815-22833.	1.5	88

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55	Spontaneous formation of inorganic helices. Nature, 2000, 405, 38-38.	13.7	87
56	Aggregative Growth of Silicalite-1. Journal of Physical Chemistry B, 2007, 111, 3398-3403.	1.2	87
57	Molecular sieves in the nanotechnology era. AICHE Journal, 2002, 48, 654-660.	1.8	85
58	Characterization of the Pore Structure of Three-Dimensionally Ordered Mesoporous Carbons Using High Resolution Gas Sorption. Langmuir, 2012, 28, 12647-12654.	1.6	85
59	Biomass-Derived Butadiene by Dehydra-Decyclization of Tetrahydrofuran. ACS Sustainable Chemistry and Engineering, 2017, 5, 3732-3736.	3.2	84
60	Thermal Stabilization of Metalâ€“Organic Framework-Derived Single-Site Catalytic Clusters through Nanocasting. Journal of the American Chemical Society, 2016, 138, 2739-2748.	6.6	83
61	High-resolution electron microscopy study on the growth of zeolite L nanoclusters. Microporous Materials, 1996, 5, 381-388.	1.6	81
62	Solutionâ€processable exfoliated zeolite nanosheets purified by density gradient centrifugation. AICHE Journal, 2013, 59, 3458-3467.	1.8	80
63	Interplay between hydrophilicity and surface barriers on water transport in zeolite membranes. Nature Communications, 2016, 7, 12762.	5.8	80
64	Silica Nanoparticle Crystals and Ordered Coatings Using Lys-Sil and a Novel Coating Device. Langmuir, 2007, 23, 9924-9928.	1.6	78
65	Progress in manipulating zeolite morphology and related applications. Current Opinion in Colloid and Interface Science, 2005, 10, 233-238.	3.4	77
66	A Chromium Hydroxide/MILâ€101(Cr) MOF Composite Catalyst and Its Use for the Selective Isomerization of Glucose to Fructose. Angewandte Chemie - International Edition, 2018, 57, 4926-4930.	7.2	73
67	Influence of layer structure preservation on the catalytic properties of the pillared zeolite MCM-36. Journal of Catalysis, 2010, 272, 298-308.	3.1	72
68	Renewable Isoprene by Sequential Hydrogenation of Itaconic Acid and Dehydra-Decyclization of 3-Methyl-Tetrahydrofuran. ACS Catalysis, 2017, 7, 1428-1431.	5.5	72
69	H2S adsorption by Ag and Cu ion exchanged faujasites. Microporous and Mesoporous Materials, 2011, 146, 127-133.	2.2	71
70	Multicomponent Adsorption of Alcohols onto Silicalite-1 from Aqueous Solution: Isotherms, Structural Analysis, and Assessment of Ideal Adsorbed Solution Theory. Langmuir, 2012, 28, 15566-15576.	1.6	71
71	Reactive Deposition of Metal Thin Films within Porous Supports from Supercritical Fluids. Chemistry of Materials, 2001, 13, 2023-2031.	3.2	68
72	2D Zeolite Coatings: Langmuirâ€“Schaefer Deposition of 3â€…nm Thick MFI Zeolite Nanosheets. Angewandte Chemie - International Edition, 2015, 54, 6571-6575.	7.2	67

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73	MFI zeolite membranes from a- and randomly oriented monolayers. Adsorption, 2006, 12, 339-360.	1.4	64
74	Tunable Oleo-Furan Surfactants by Acylation of Renewable Furans. ACS Central Science, 2016, 2, 820-824.	5.3	64
75	A high-performance adsorbent for hydrogen sulfide removal. Microporous and Mesoporous Materials, 2014, 190, 152-155.	2.2	63
76	Rapid thermal processing and separation performance of columnar MFI membranes on porous stainless steel tubes. Energy and Environmental Science, 2011, 4, 3479.	15.6	62
77	Development of the Transferable Potentials for Phase Equilibria Model for Hydrogen Sulfide. Journal of Physical Chemistry B, 2015, 119, 7041-7052.	1.2	59
78	On the kinetics of the isomerization of glucose to fructose using Sn-Beta. Chemical Engineering Science, 2014, 116, 235-242.	1.9	57
79	Controlling Dissolution and Transformation of Zeolitic Imidazolate Frameworks by using Electronâ€Beamâ€Induced Amorphization. Angewandte Chemie - International Edition, 2018, 57, 13592-13597.	7.2	57
80	A model for the performance of microporous mixed matrix membranes with oriented selective flakes. Journal of Membrane Science, 2007, 295, 50-70.	4.1	56
81	Understanding Diffusion in Hierarchical Zeolites with House-of-Cards Nanosheets. ACS Nano, 2016, 10, 7612-7618.	7.3	56
82	Ethanol/water mixture pervaporation performance of <scp>b</scp>â€oriented silicaliteâ€1 membranes made by gelâ€free secondary growth. AICHE Journal, 2016, 62, 556-563.	1.8	55
83	Continuousc-Oriented AlPO4-5 Films by Tertiary Growth. Chemistry of Materials, 2007, 19, 792-797.	3.2	54
84	ZIFâ€8 Membrane Separation Performance Tuning by Vapor Phase Ligand Treatment. Angewandte Chemie - International Edition, 2019, 58, 16390-16394.	7.2	54
85	The Catalytic Mechanics of Dynamic Surfaces: Stimulating Methods for Promoting Catalytic Resonance. ACS Catalysis, 2020, 10, 12666-12695.	5.5	54
86	Heteroepitaxial Growth of a Zeolite. Angewandte Chemie - International Edition, 2001, 40, 1069-1071.	7.2	53
87	On the performance of c-oriented MFI zeolite Membranes treated by rapid thermal processing. Journal of Membrane Science, 2013, 436, 79-89.	4.1	52
88	On the TEM and AFM Evidence of Zeosil Nanoslabs Present during the Synthesis of Silicalite-1. Angewandte Chemie - International Edition, 2004, 43, 4558-4561.	7.2	51
89	Probing the Relationship between Silicalite-1 Defects and Polyol Adsorption Properties. Langmuir, 2013, 29, 6546-6555.	1.6	51
90	Simple quantification of zeolite acid site density by reactive gas chromatography. Catalysis Science and Technology, 2017, 7, 3831-3841.	2.1	51

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91	Nanoscale Control of Homoepitaxial Growth on a Twoâ€Dimensional Zeolite. Angewandte Chemie - International Edition, 2017, 56, 535-539.	7.2	50
92	Preparation ofb-Oriented MFI Films on Porous Stainless Steel Substrates. Industrial & Engineering Chemistry Research, 2005, 44, 9086-9095.	1.8	48
93	Structure and Colloidal Stability of Nanosized Zeolite Beta Precursors. Langmuir, 2010, 26, 1260-1270.	1.6	47
94	A Study of Heat-Treatment Induced Framework Contraction in Strontium-ETS-4 by Powder Neutron Diffraction and Vibrational Spectroscopy. Journal of the American Chemical Society, 2001, 123, 12781-12790.	6.6	46
95	Physicochemical Characterization of Silicalite-1 Surface and Its Implications on Crystal Growth. Langmuir, 2003, 19, 4619-4626.	1.6	44
96	Epitaxially Grown Layered MFIâ€“Bulk MFI Hybrid Zeolitic Materials. ACS Nano, 2012, 6, 9978-9988.	7.3	44
97	Oxidation and Reduction under Cover: Chemistry at the Confined Space between Ultrathin Nanoporous Silicates and Ru(0001). Journal of Physical Chemistry C, 2016, 120, 8240-8245.	1.5	44
98	Selective adsorption of HMF on porous carbons from fructose/DMSO mixtures. Microporous and Mesoporous Materials, 2012, 158, 253-256.	2.2	42
99	Activity and selectivity differences of external BrÃ¸nsted acid sites of single-unit-cell thick and conventional MFI and MWW zeolites. Microporous and Mesoporous Materials, 2014, 200, 287-290.	2.2	42
100	Nucleation of open framework materials: Navigating the voids. MRS Bulletin, 2016, 41, 393-398.	1.7	42
101	para â€Xylene Ultraâ€selective Zeolite MFI Membranes Fabricated from Nanosheet Monolayers at the Airâ€“Water Interface. Angewandte Chemie, 2018, 130, 489-494.	1.6	42
102	Identifying Optimal Zeolitic Sorbents for Sweetening of Highly Sour Natural Gas. Angewandte Chemie - International Edition, 2016, 55, 5938-5942.	7.2	41
103	Factors Governing the Formation of Hierarchically and Sequentially Intergrown MFI Zeolites by Using Simple Diquaternary Ammonium Structure-Directing Agents. Chemistry of Materials, 2016, 28, 8997-9007.	3.2	41
104	MCM-22/Silica Selective Flake Nanocomposite Membranes for Hydrogen Separations. Journal of the American Chemical Society, 2010, 132, 448-449.	6.6	40
105	Pillared Snâ€MWW Prepared by a Solidâ€Stateâ€Exchange Method and its Use as a Lewis Acid Catalyst. ChemCatChem, 2016, 8, 1274-1278.	1.8	40
106	Direct Synthesis of 7 nm-Thick Zinc(II)â€“Benzimidazoleâ€“Acetate Metalâ€“Organic Framework Nanosheets. Chemistry of Materials, 2018, 30, 69-73.	3.2	40
107	Quantification of thickness and wrinkling of exfoliated two-dimensional zeolite nanosheets. Nature Communications, 2015, 6, 7128.	5.8	39
108	Selective Glucoseâ€toâ€Fructose Isomerization over Modified Zirconium UiOâ€66 in Alcohol Media. ChemCatChem, 2018, 10, 2417-2423.	1.8	39

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109	Strain of MFI crystals in membranes: An in situ synchrotron X-ray study. Microporous and Mesoporous Materials, 2005, 84, 332-337.	2.2	38
110	A semi-empirical approach for predicting the performance of mixed matrix membranes containing selective flakes. Journal of Membrane Science, 2009, 326, 595-607.	4.1	38
111	Catalysis Center for Energy Innovation for Biomass Processing: Research Strategies and Goals. Catalysis Letters, 2010, 140, 77-84.	1.4	38
112	Growth of zeolite crystals with graphene oxide nanosheets. Chemical Communications, 2012, 48, 2249.	2.2	38
113	Synthesis and Structure of Ultrafine Zeolite KL (LTL) Crystallites and their Use for Thin Film Zeolite Processing. Materials Research Society Symposia Proceedings, 1994, 371, 21.	0.1	37
114	Coating of Open Cell Foams. Industrial & Engineering Chemistry Research, 2012, 51, 9250-9259.	1.8	37
115	Density Functional Theory Study on the Adsorption of H₂S and Other Claus Process Tail Gas Components on Copper- and Silver-Exchanged Y Zeolites. Journal of Physical Chemistry C, 2012, 116, 3561-3575.	1.5	37
116	Monte Carlo Simulations Probing the Adsorptive Separation of Hydrogen Sulfide/Methane Mixtures Using All-Silica Zeolites. Langmuir, 2015, 31, 12268-12278.	1.6	37
117	ZIFâ€8 Membrane Permselectivity Modification by Manganese(II) Acetylacetonate Vapor Treatment. Angewandte Chemie - International Edition, 2021, 60, 9316-9320.	7.2	36
118	On the nucleation and crystallization of silicalite-1 from a dilute clear sol. Microporous and Mesoporous Materials, 2011, 144, 74-81.	2.2	35
119	On defects in highly a-oriented MFI membranes. Microporous and Mesoporous Materials, 2013, 170, 1-8.	2.2	35
120	Spontaneous Formation of Inorganic Helical Fibers and Rings. Journal of the American Chemical Society, 2000, 122, 12158-12163.	6.6	33
121	Layer-by-Layer Deposition of Barrier and Permselective c-Oriented-MCM-22/Silica Composite Films. Industrial & Engineering Chemistry Research, 2007, 46, 7096-7106.	1.8	33
122	Growth of AlPO4-5 and CoAPO-5 films from amorphous seeds. Microporous and Mesoporous Materials, 2008, 115, 11-22.	2.2	32
123	Toward Submicrometer c-Oriented Nanoporous Films with Unidimensional Pore Network: AFI Film Morphology Control by Precursor Mixture Manipulation. Chemistry of Materials, 2010, 22, 1492-1502.	3.2	31
124	First principles Monte Carlo simulations of unary and binary adsorption: CO₂, N₂, and H₂O in Mg-MOF-74. Chemical Communications, 2018, 54, 10816-10819.	2.2	31
125	Glucose isomerization in dioxane/water with Sn-Î² catalyst: improved catalyst stability and use for HMF production. Chemical Communications, 2019, 55, 14942-14945.	2.2	31
126	Oriented CoSAPOâ€5 Membranes by Microwaveâ€Enhanced Growth on TiO₂â€Coated Porous Alumina. Angewandte Chemie - International Edition, 2012, 51, 2470-2473.	7.2	30

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127	A mathematical model for zeolite membrane module performance and its use for techno-economic evaluation of improved energy efficiency hybrid membrane-distillation processes for butane isomer separations. Journal of Membrane Science, 2016, 520, 434-449.	4.1	30
128	Combining Pre- and Post-Nucleation Trajectories for the Synthesis of High FAU-Content Faujasite Nanocrystals from Organic-Free Sols. Chemistry of Materials, 2016, 28, 4204-4213.	3.2	30
129	A Chromium Hydroxide/MILâ€101(Cr) MOF Composite Catalyst and Its Use for the Selective Isomerization of Glucose to Fructose. Angewandte Chemie, 2018, 130, 5020-5024.	1.6	30
130	Twin-free, directly synthesized MFI nanosheets with improved thickness uniformity and their use in membrane fabrication. Science Advances, 2022, 8, eabm8162.	4.7	30
131	Pores by Pillaring: Not Always a Maze. Angewandte Chemie - International Edition, 2008, 47, 4262-4263.	7.2	29
132	On stability and performance of highly c-oriented columnar AlPO4-5 and CoAPO-5 membranes. Microporous and Mesoporous Materials, 2012, 147, 286-294.	2.2	29
133	Elucidating structureâ€“properties relations for the design of highly selective carbon-based HMF sorbents. Microporous and Mesoporous Materials, 2014, 184, 72-82.	2.2	29
134	Large-Grain, Oriented, and Thin Zeolite MFI Films from Directly Synthesized Nanosheet Coatings. Chemistry of Materials, 2018, 30, 3545-3551.	3.2	29
135	A quantitative study of the structureâ€“activity relationship in hierarchical zeolites using liquidâ€phase reactions. AICHE Journal, 2019, 65, 1067-1075.	1.8	29
136	Role of ethanol in sodalite crystallization in an ethanolâ€“Na2Oâ€“Al2O3â€“SiO2â€“H2O system. CrystEngComm, 2011, 13, 4714.	1.3	28
137	Silicaâ€Nanoparticle Coatings by Adsorption from Lysineâ€“Silicaâ€Nanoparticle Sols on Inorganic and Biological Surfaces. Angewandte Chemie - International Edition, 2011, 50, 1617-1621.	7.2	28
138	Melt Compounding of Swollen Titanosilicate JDF-L1 with Polysulfone To Obtain Mixed Matrix Membranes for H2/CH4 Separation. Industrial & Engineering Chemistry Research, 2013, 52, 1901-1907.	1.8	28
139	Adsorptive Separation of 1-Butanol from Aqueous Solutions Using MFI- and FER-Type Zeolite Frameworks: A Monte Carlo Study. Langmuir, 2016, 32, 2093-2101.	1.6	28
140	Transferable potentials for phase equilibria. Improved unitedâ€atom description of ethane and ethylene. AICHE Journal, 2017, 63, 5098-5110.	1.8	28
141	Dehydra-Decyclization of Tetrahydrofuran on H-ZSM5: Mechanisms, Pathways, and Transition State Entropy. ACS Catalysis, 2019, 9, 10279-10293.	5.5	27
142	ZIFâ€8 Membrane Separation Performance Tuning by Vapor Phase Ligand Treatment. Angewandte Chemie, 2019, 131, 16542-16546.	1.6	26
143	Steamâ€Induced Coarsening of Singleâ€Unitâ€Cell MFI Zeolite Nanosheets and Its Effect on External Surface BrÃ¸nsted Acid Catalysis. Angewandte Chemie - International Edition, 2020, 59, 9579-9585.	7.2	26
144	A Review of Biorefinery Separations for Bioproduct Production via Thermocatalytic Processing. Annual Review of Chemical and Biomolecular Engineering, 2017, 8, 115-137.	3.3	24

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145	Understanding the Unusual Adsorption Behavior in Hierarchical Zeolite Nanosheets. ChemPhysChem, 2014, 15, 2225-2229.	1.0	22
146	On the Economics and Process Design of Renewable Butadiene from Biomass-Derived Furfural. ACS Sustainable Chemistry and Engineering, 2020, 8, 3273-3282.	3.2	22
147	Dehydra-decyclization of 2-methyltetrahydrofuran to pentadienes on boron-containing zeolites. Green Chemistry, 2020, 22, 4147-4160.	4.6	22
148	Long-term steam stability of MWW structure zeolites (MCM-22 and ITQ-1). Microporous and Mesoporous Materials, 2014, 193, 134-144.	2.2	21
149	Preparation of a graphene oxide/faujasite composite adsorbent. Microporous and Mesoporous Materials, 2018, 268, 243-250.	2.2	21
150	Phosphonateâ€Modified UiOâ€66 BrÃ¸nsted Acid Catalyst and Its Use in Dehydraâ€Decyclization of 2â€Methyltetrahydrofuran to Pentadienes. Angewandte Chemie - International Edition, 2020, 59, 13260-13266.	7.2	21
151	Modeling, optimization, and cost analysis of an IGCC plant with a membrane reactor for carbon capture. AIChE Journal, 2016, 62, 1568-1580.	1.8	20
152	High-performance ammonia-selective MFI nanosheet membranes. Chemical Communications, 2021, 57, 580-582.	2.2	20
153	Solvent-free bottom-up patterning of zeolitic imidazolate frameworks. Nature Communications, 2022, 13, 420.	5.8	20
154	Modeling and Optimization of Membrane Reactors for Carbon Capture in Integrated Gasification Combined Cycle Units. Industrial & Engineering Chemistry Research, 2012, 51, 5480-5489.	1.8	19
155	Economic assessment of Temperature Swing Adsorption systems as Claus Tail Gas Clean Up Units. Chemical Engineering Science, 2015, 126, 186-195.	1.9	19
156	Multi-modal surface analysis of porous films under operando conditions. AIP Advances, 2020, 10, .	0.6	19
157	Fewâ€Unitâ€Cell MFI Zeolite Synthesized using a Simple Diâ€quaternary Ammonium Structureâ€Directing Agent. Angewandte Chemie - International Edition, 2021, 60, 19214-19221.	7.2	19
158	Hierarchical materials: Background and perspectives. MRS Bulletin, 2016, 41, 661-664.	1.7	18
159	Bioethanol enrichment using zeolite membranes: Molecular modeling, conceptual process design and techno-economic analysis. Journal of Membrane Science, 2017, 540, 464-476.	4.1	18
160	Epitaxial growth: rapid synthesis of highly permeable and selective zeolite-T membranes. Journal of Materials Chemistry A, 2017, 5, 17828-17832.	5.2	17
161	Cooperative Catalysis by Surface Lewis Acid/Silanol for Selective Fructose Etherification on Sn-SPP Zeolite. ACS Catalysis, 2018, 8, 9056-9065.	5.5	17
162	P-Site Structural Diversity and Evolution in a Zeosil Catalyst. Journal of the American Chemical Society, 2021, 143, 1968-1983.	6.6	17

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163	Electron Beam Patterning of Metalâ€“Organic Frameworks. Chemistry of Materials, 2021, 33, 754-760.	3.2	17
164	Assembly of Graphene Oxide Nanosheets on Diamine-Treated PVDF Hollow Fiber as Nanofiltration Membranes. ACS Applied Polymer Materials, 2020, 2, 3859-3866.	2.0	16
165	Two Distinct Stages of Structural Modification of ZIF-L MOF under Electron-Beam Irradiation. Chemistry of Materials, 2021, 33, 5681-5689.	3.2	16
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