

# The Maxwell-Stefan approach to mass transfer

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Citation Report

#	ARTICLE	IF	CITATIONS
5	Ionic Transport in Compacted Bentonite: Preliminary Equilibrium Results. Materials Research Society Symposia Proceedings, 1997, 506, 383.	0.1	2
6	Simulation of the isomerization of an ortho-diethylbenzene on zeolites using a continuum approach and different diffusion models. Microporous Materials, 1997, 12, 281-291.	1.6	6
7	Ion exchange diffusion in electromembranes and its description using the Maxwell-Stefan formalism. Journal of Membrane Science, 1997, 137, 121-132.	4.1	27
8	Maxwell-Stefan analysis of multicomponent transient diffusion in a capillary and adsorption of hydrocarbons in activated carbon particle. Chemical Engineering Science, 1998, 53, 1239-1252.	1.9	31
9	A Maxwell-Stefan approach to modelling the cross-flow ultrafiltration of protein solutions in tubular membranes. Chemical Engineering Science, 1998, 53, 2153-2166.	1.9	19
10	The Maxwell-Stefan equations for diffusion in multiphase systems with intersecting dividing surfaces. Physica A: Statistical Mechanics and Its Applications, 1998, 254, 365-376.	1.2	8
11	Mathematical Models for Motile Bacterial Transport in Cylindrical Tubes. Journal of Theoretical Biology, 1998, 195, 481-504.	0.8	35
12	Diafiltration by nanofiltration: Prediction and optimization. AIChE Journal, 1998, 44, 1799-1812.	1.8	196
13	Effect of kinetics and mass transfer on design of extractive reaction processes. AIChE Journal, 1998, 44, 2212-2228.	1.8	33
14	Maxwell-Stefan approach coupled drop population model for the dynamic simulation of liquid-liquid extraction pulsed column. Computers and Chemical Engineering, 1998, 22, S379-S386.	2.0	12
15	Contact drying combined with membrane separation: Dewatering rates of porous spheres wetted with four different liquid mixtures. Chemical Engineering and Processing: Process Intensification, 1998, 37, 317-330.	1.8	2
16	Hydrogen Recovery from a H <sub>2</sub> /H <sub>2</sub> O/HBr Mixture Utilizing Silica-Based Membranes at Elevated Temperatures. 1. Preparation of H <sub>2</sub> O- and H <sub>2</sub> -Selective Membranes. Industrial & Engineering Chemistry Research, 1998, 37, 2502-2508.	1.8	47
17	Using molecular dynamics to obtain Maxwell-Stefan diffusion coefficients in liquid systems. Molecular Physics, 1998, 94, 495-503.	0.8	17
18	Rate-Based Modeling of Reactive Absorption of CO <sub>2</sub> and H <sub>2</sub> S into Aqueous Methyl-diethanolamine. Industrial & Engineering Chemistry Research, 1998, 37, 4107-4117.	1.8	76
19	Technische Chemie 1997. Nachrichten Aus Der Chemie, 1998, 46, 235-241.	0.0	1
20	Minimum Error Fickian Diffusion Coefficients for Mass Diffusion in Multicomponent Gas Mixtures. Journal of Non-Equilibrium Thermodynamics, 1999, 24, 1-39.	2.4	7
21	Transport of Gases in Porous Membranes. MRS Bulletin, 1999, 24, 41-45.	1.7	24
22	Molecular Dynamics Simulation of Self-Diffusion and Maxwell-Stefan Diffusion Coefficients in Liquid Mixtures of Methanol and Water. Molecular Simulation, 1999, 23, 79-94.	0.9	17

#	ARTICLE	IF	CITATIONS
23	Molecular Dynamics Simulation of the Maxwell-Stefan Diffusion Coefficients in Lennard-Jones Liquid Mixtures. <i>Molecular Simulation</i> , 1999, 23, 43-54.	0.9	9
24	Nonequilibrium molecular dynamics simulation of a model carbon membrane separation of CH <sub>4</sub> /H <sub>2</sub> mixtures. <i>Chemical Engineering Journal</i> , 1999, 74, 85-97.	6.6	60
25	Diffusion and reaction in ZSM-5 and composite catalysts for the methanol-to-olefins process. <i>Catalysis Today</i> , 1999, 50, 637-650.	2.2	42
26	Diffusion and reaction in porous networks. <i>Catalysis Today</i> , 1999, 53, 245-258.	2.2	106
27	Protein diffusion in charged polyacrylamide gels. <i>Journal of Chromatography A</i> , 1999, 865, 155-168.	1.8	39
28	Influence of isotherm inflection on diffusion in silicalite. <i>Chemical Engineering Science</i> , 1999, 54, 1751-1757.	1.9	99
29	Nonequilibrium modelling of reactive distillation: Multiple steady states in MTBE synthesis. <i>Chemical Engineering Science</i> , 1999, 54, 1389-1395.	1.9	76
30	Cyclone flow cell for the investigation of gas-diffusion electrodes. <i>Journal of Applied Electrochemistry</i> , 1999, 29, 919-926.	1.5	12
31	Influence of Mass Transfer in Distillation of Mixtures with a Distillation Boundary. <i>Chemical Engineering Research and Design</i> , 1999, 77, 561-565.	2.7	19
32	Multicomponent adsorption, desorption and displacement kinetics of hydrocarbons on activated carbon – dual diffusion and finite kinetics model. <i>Separation and Purification Technology</i> , 1999, 17, 131-146.	3.9	16
33	Binary protein adsorption on gel-composite ion-exchange media. <i>AIChE Journal</i> , 1999, 45, 512-522.	1.8	59
34	Gas permeation properties of ion-exchanged faujasite-type zeolite membranes. <i>AIChE Journal</i> , 1999, 45, 1220-1226.	1.8	159
35	Nonequilibrium cell model for multicomponent (reactive) separation processes. <i>AIChE Journal</i> , 1999, 45, 2357-2370.	1.8	41
36	Nonequilibrium Cell Model for Packed Distillation Columns The Influence of Maldistribution. <i>Industrial &amp; Engineering Chemistry Research</i> , 1999, 38, 3988-3999.	1.8	36
37	Modelling reactive distillation. <i>Chemical Engineering Science</i> , 2000, 55, 5183-5229.	1.9	643
38	Development of a dynamic nonequilibrium cell model for reactive distillation tray columns. <i>Chemical Engineering Science</i> , 2000, 55, 6139-6154.	1.9	19
39	Binary diffusion of unequal sized molecules in zeolites. <i>Chemical Engineering Science</i> , 2000, 55, 1747-1754.	1.9	21
40	Diffusion of binary mixtures in zeolites: molecular dynamics simulations versus Maxwell-Stefan theory. <i>Chemical Physics Letters</i> , 2000, 326, 477-484.	1.2	46

#	ARTICLE	IF	CITATIONS
41	Experimental study and numerical simulation of hydrogen/isobutane permeation and separation using MFI-zeolite membrane reactor. <i>Catalysis Today</i> , 2000, 56, 253-264.	2.2	69
42	Pervaporation of alcohol/water and dimethylformamide/water mixtures using hydrophilic zeolite NaA membranes: mechanisms and experimental results. <i>Journal of Membrane Science</i> , 2000, 179, 185-205.	4.1	302
43	Influence of non condensables on the condensation of vapour mixture forming immiscible liquids. <i>International Communications in Heat and Mass Transfer</i> , 2000, 27, 425-434.	2.9	1
44	Diffusion of binary mixtures in microporous materials: Overshoot and roll-up phenomena. <i>International Communications in Heat and Mass Transfer</i> , 2000, 27, 893-902.	2.9	18
45	The generalized Maxwell-Stefan model for diffusion in zeolites. <i>Chemical Engineering Science</i> , 2000, 55, 2923-2930.	1.9	216
46	Non-isothermal effects on adsorption kinetics of hydrocarbon mixtures in activated carbon. <i>Separation and Purification Technology</i> , 2000, 20, 49-65.	3.9	20
47	Separation of hydrocarbon mixtures using zeolite membranes: a modelling approach combining molecular simulations with the Maxwell-Stefan theory. <i>Separation and Purification Technology</i> , 2000, 21, 111-136.	3.9	95
48	Factorization of Transport Coefficients in Macroporous Media. <i>Transport in Porous Media</i> , 2000, 41, 305-323.	1.2	25
49	Film Model Approximation for Multicomponent Adsorption. <i>Adsorption</i> , 2000, 6, 5-13.	1.4	23
50	Effectiveness of surface coatings to protect reinforced concrete in marine environments. <i>Materials and Structures/Materiaux Et Constructions</i> , 2000, 33, 618-626.	1.3	40
51	Molecular Simulation of Transport in a Single Micropore. <i>Membrane Science and Technology</i> , 2000, 6, 257-296.	0.5	10
52	Comparison of equilibrium stage and nonequilibrium stage models for reactive distillation. <i>Chemical Engineering Journal</i> , 2000, 76, 33-47.	6.6	125
53	Experimental Measurement of Gas Diffusivity in Bitumen: Results for Carbon Dioxide. <i>Industrial &amp; Engineering Chemistry Research</i> , 2000, 39, 1080-1087.	1.8	146
54	Modeling of Diffusion in Zeolites. <i>Reviews in Chemical Engineering</i> , 2000, 16, .	2.3	228
55	Monte Carlo simulations of self- and transport-diffusivities of 2-methylhexane in silicalite. <i>Physical Chemistry Chemical Physics</i> , 2000, 2, 2389-2394.	1.3	62
56	Permeation of Hexane Isomers across ZSM-5 Zeolite Membranes. <i>Industrial &amp; Engineering Chemistry Research</i> , 2000, 39, 2618-2622.	1.8	42
57	Past Progress and Future Challenges in Adsorption Research. <i>Industrial &amp; Engineering Chemistry Research</i> , 2000, 39, 2127-2131.	1.8	85
58	Estimation of Effective Diffusivity in Drying of Heterogeneous Porous Media. <i>Industrial &amp; Engineering Chemistry Research</i> , 2000, 39, 1443-1452.	1.8	25

#	ARTICLE	IF	CITATIONS
59	Counterdiffusion of p-Xylene/Benzene and p-Xylene/o-Xylene in Silicalite Studied by the Zero-Length Column Technique. <i>Industrial &amp; Engineering Chemistry Research</i> , 2000, 39, 821-828.	1.8	26
60	Estimation of Gas Permeability of a Zeolite Membrane, Based on a Molecular Simulation Technique and Permeation Model. <i>Journal of Physical Chemistry B</i> , 2000, 104, 1971-1976.	1.2	29
61	Nonequilibrium Modeling of Reactive Distillation: A Dusty Fluid Model for Heterogeneously Catalyzed Processes. <i>Industrial &amp; Engineering Chemistry Research</i> , 2000, 39, 1596-1607.	1.8	46
62	Predicting the Effect of Drying on Supported Coimpregnation Catalysts. <i>Industrial &amp; Engineering Chemistry Research</i> , 2001, 40, 3989-3999.	1.8	16
63	Mathematical Modeling of the Pervaporative Separation of Methanol~Methylterbutyl Ether Mixtures. <i>Industrial &amp; Engineering Chemistry Research</i> , 2001, 40, 1720-1731.	1.8	39
64	DRYING, GROWTH TOWARDS A UNIT OPERATION. <i>Drying Technology</i> , 2001, 19, 1505-1541.	1.7	3
65	Monte Carlo simulations in zeolites. <i>Current Opinion in Solid State and Materials Science</i> , 2001, 5, 455-461.	5.6	38
66	Molecular simulations of adsorption and siting of light alkanes in silicalite-1. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 453-462.	1.3	70
67	Kinetic Monte Carlo simulations of transport diffusivities of binary mixtures in zeolites. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 3185-3191.	1.3	41
68	A Maxwell~Stefan Model of Bidisperse Pore Pressurization for Langmuir Adsorption of Gas Mixtures. <i>Industrial &amp; Engineering Chemistry Research</i> , 2001, 40, 2289-2301.	1.8	12
69	Diffusion of Binary Mixtures in Zeolites: Kinetic Monte Carlo versus Molecular Dynamics Simulations. <i>Langmuir</i> , 2001, 17, 247-254.	1.6	65
71	Use of the "dusty-gas" model for the analysis of ethylbenzene oxidehydrogenation process. <i>Studies in Surface Science and Catalysis</i> , 2001, 133, 147-154.	1.5	0
72	A simulation study of the effects of adsorbent energy on the diffusion of molecules in slit pores: 1 commensurate slit widths. <i>Molecular Physics</i> , 2001, 99, 383-391.	0.8	5
73	Mass and heat transfer to spheres, cylinders and planar surfaces: A unified "film" model description. <i>International Communications in Heat and Mass Transfer</i> , 2001, 28, 39-48.	2.9	5
74	Diffusion of binary mixtures across zeolite membranes: entropy effects on permeation selectivity. <i>International Communications in Heat and Mass Transfer</i> , 2001, 28, 337-346.	2.9	30
75	Crossing of boundaries in ternary azeotropic distillation: influence of interphase mass transfer. <i>International Communications in Heat and Mass Transfer</i> , 2001, 28, 347-356.	2.9	13
76	Membranes and films of zeolite and zeolite-like materials. <i>Journal of Physics and Chemistry of Solids</i> , 2001, 62, 1899-1910.	1.9	86
77	Influence of column hardware on the performance of reactive distillation columns. <i>Catalysis Today</i> , 2001, 66, 225-232.	2.2	13

#	ARTICLE	IF	CITATIONS
78	Verification of the Maxwell–Stefan theory for mixture diffusion in zeolites by comparison with MD simulations. <i>Chemical Engineering Journal</i> , 2001, 84, 207-214.	6.6	10
79	Estimation of inorganic gas permeability through an MFI-type silicalite membrane by a molecular simulation technique combined with permeation theory. <i>Microporous and Mesoporous Materials</i> , 2001, 48, 247-254.	2.2	34
80	Multicomponent mass transport in porous solids and estimation of transport parameters. <i>Applied Catalysis A: General</i> , 2001, 211, 227-237.	2.2	18
81	PH–Postharvest Technology. <i>Biosystems Engineering</i> , 2001, 80, 351-364.	0.4	31
82	Synthesis and characterization of catalytic nanoporous carbon membranes. <i>AIChE Journal</i> , 2001, 47, 66-78.	1.8	28
83	Predicting membrane flux of CH <sub>4</sub> and CF <sub>4</sub> mixtures in Faujasite from molecular simulations. <i>AIChE Journal</i> , 2001, 47, 2032-2041.	1.8	73
84	Diffusion and reactions of multicomponent electrolytes in poly(vinyl alcohol) hydrogels – modeling and experiment. <i>Chemical Engineering Science</i> , 2001, 56, 1305-1315.	1.9	14
85	Dynamic behaviour of reactive distillation tray columns described with a nonequilibrium cell model. <i>Chemical Engineering Science</i> , 2001, 56, 1721-1729.	1.9	14
86	A generalised dynamic model for char particle gasification with structure evolution and peripheral fragmentation. <i>Chemical Engineering Science</i> , 2001, 56, 3683-3697.	1.9	51
87	Dynamics of particle growth and overheating in gas-phase polymerization reactors. <i>Chemical Engineering Science</i> , 2001, 56, 3951-3977.	1.9	36
88	Impact of drying on the catalyst profile in supported impregnation catalysts. <i>Chemical Engineering Science</i> , 2001, 56, 4473-4487.	1.9	125
89	Multicomponent counter-current gas diffusion in porous solids: the Graham's-law diffusion cell. <i>Chemical Engineering Science</i> , 2001, 56, 5231-5237.	1.9	23
90	Monte Carlo simulations of sorption and diffusion of isobutane in silicalite. <i>Chemical Physics Letters</i> , 2001, 342, 148-154.	1.2	33
91	The mass transfer coefficient for the combustion of pulverized carbon particles. <i>Combustion and Flame</i> , 2001, 126, 1662-1668.	2.8	21
92	Title is missing!. <i>Doklady Chemistry</i> , 2001, 376, 42-45.	0.2	1
93	A Stefan-Maxwell Model of Single Pore Pressurization for Langmuir Adsorption of Gas Mixtures. <i>Adsorption</i> , 2001, 7, 171-187.	1.4	3
94	Exploiting Configurational Entropy Effects for Separation of Hexane Isomers Using Silicalite-1. <i>Chemical Engineering Research and Design</i> , 2001, 79, 182-194.	2.7	28
95	Investigation of mass transfer through inorganic membranes with several layers. <i>Catalysis Today</i> , 2001, 67, 205-216.	2.2	77

#	ARTICLE	IF	CITATIONS
96	Dynamic behaviour of reactive distillation columns described by a nonequilibrium stage model. <i>Chemical Engineering Science</i> , 2001, 56, 2085-2102.	1.9	40
97	Inter-relation between self- and jump-diffusivities in zeolites. <i>Chemical Physics Letters</i> , 2001, 333, 278-284.	1.2	51
98	MODELLING OF MULTICOMPONENT MASS TRANSPORT IN DEFORMABLE MEDIA: APPLICATION TO DEWATERING IMPREGNATION SOAKING PROCESS. <i>Drying Technology</i> , 2001, 19, 2081-2101.	1.7	9
99	Catalytic distillation modeling. <i>Computer Aided Chemical Engineering</i> , 2002, , 181-186.	0.3	1
100	Modeling of the Catalytic Distillation Process for the Synthesis of Ethyl Cellosolve Using A Three-Phase Nonequilibrium Model. <i>International Journal of Chemical Reactor Engineering</i> , 2002, 1, .	0.6	2
101	Multi-scale Modeling Strategy for Separation of Alkane Mixtures using Zeolites. <i>Computer Aided Chemical Engineering</i> , 2002, 10, 109-114.	0.3	1
102	Application of Transport Equations for Heat and Mass Transfer to Distillation of Ethanol and Water. <i>Computer Aided Chemical Engineering</i> , 2002, 10, 235-240.	0.3	1
103	Pervaporative Dehydration of an Industrial Ketonic Solvent Using Ceramic Silica Membranes. <i>Materials Research Society Symposia Proceedings</i> , 2002, 752, 1.	0.1	2
104	The Zeolite ZSM-5 membrane study; synthesis, permeation and modeling.. <i>Materials Research Society Symposia Proceedings</i> , 2002, 752, 1.	0.1	1
105	Mesoscopic modeling of binary diffusion through microporous zeolite membranes. <i>Materials Research Society Symposia Proceedings</i> , 2002, 752, 1.	0.1	0
106	Organic/inorganic Nanohybrid Membranes for Nanofiltration of Nonaqueous Solutions. <i>Materials Research Society Symposia Proceedings</i> , 2002, 752, 1.	0.1	1
108	Modeling of Homogeneous and Heterogeneous Reactive Distillation Processes. , 0, , 215-240.		2
111	Crossing of the Distillation Boundary in Homogeneous Azeotropic Distillation:Â Influence of Interphase Mass Transfer. <i>Industrial &amp; Engineering Chemistry Research</i> , 2002, 41, 1621-1631.	1.8	17
112	Analysis of Binary Transport Diffusivities and Self-Diffusivities in a Lattice Model for Silicalite. <i>Langmuir</i> , 2002, 18, 7393-7400.	1.6	23
113	A simulation study of the pore size dependence of transport selectivity in cylindrical pores. <i>Molecular Physics</i> , 2002, 100, 2151-2163.	0.8	16
114	Self-diffusivities in multicomponent mixtures in zeolites. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 1891-1898.	1.3	73
116	Influence of interphase mass transfer on the composition trajectories and crossing of boundaries in ternary azeotropic distillation. <i>Separation and Purification Technology</i> , 2002, 29, 1-13.	3.9	18
117	Application of the Charge Regulation Model to Transport of Ions through Hydrophilic Membranes: One-Dimensional Transport Model for Narrow Pores (Nanofiltration). <i>Journal of Colloid and Interface Science</i> , 2002, 251, 131-142.	5.0	43

#	ARTICLE	IF	CITATIONS
118	Diffusivity of CO <sub>2</sub> , CH <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> and N <sub>2</sub> in athabasca bitumen. Canadian Journal of Chemical Engineering, 2002, 80, 116-125.	0.9	161
119	Simplified treatment of mass transfer for gas-phase hydrogenation/dehydrogenation of heavy compounds. Korean Journal of Chemical Engineering, 2002, 19, 252-260.	1.2	4
120	Dynamics of multicomponent mass transport with complex reaction in a porous catalyst. Applied Catalysis A: General, 2002, 224, 255-269.	2.2	0
121	Verification of the Maxwell-Stefan theory for tracer diffusion in zeolites. Chemical Engineering Journal, 2002, 85, 7-15.	6.6	33
122	Recent developments on multiscale, hierarchical modeling of chemical reactors. Chemical Engineering Journal, 2002, 90, 3-23.	6.6	126
123	Removal of aromatics from multicomponent organic mixtures by pervaporation using polyurethane membranes: experimental and modeling. Journal of Membrane Science, 2002, 206, 277-290.	4.1	75
124	The need for using rigorous rate-based models for simulations of ternary azeotropic distillation. Computers and Chemical Engineering, 2002, 26, 1265-1279.	2.0	17
125	Verification of the Maxwell-Stefan theory for diffusion of three-component mixtures in zeolites. Chemical Engineering Journal, 2002, 87, 1-9.	6.6	29
126	Modeling of Cryopreservation of Engineered Tissues with One-Dimensional Geometry. Biotechnology Progress, 2002, 18, 354-361.	1.3	24
127	Predicting transport diffusivities of binary mixtures in zeolites. Chemical Physics Letters, 2002, 355, 483-489.	1.2	22
128	Experimental Verification of the Maxwell-Stefan Formulation in Describing Composition Trajectories During Azeotropic Distillation. Chemical Engineering Research and Design, 2002, 80, 654-666.	2.7	11
129	Adsorption Calculations Using the Film Model Approximation for Intraparticle Mass Transfer. Adsorption, 2003, 9, 55-65.	1.4	4
130	Composition Trajectories for Heterogeneous Azeotropic Distillation in a Bubble-Cap Tray Column. Chemical Engineering Research and Design, 2003, 81, 413-426.	2.7	25
131	On the Optimization of Gas Separation Processes Using Zeolite Membranes. Chemical Engineering Research and Design, 2003, 81, 525-536.	2.7	18
132	Modelling issues in zeolite based separation processes. Separation and Purification Technology, 2003, 33, 213-254.	3.9	191
133	Food Process Engineering: The Last 25 Years and Challenges Ahead. Comprehensive Reviews in Food Science and Food Safety, 2003, 2, 42-81.	5.9	70
134	Analysis of multicomponent adsorption kinetics on activated carbon. AIChE Journal, 2003, 49, 883-895.	1.8	12
135	Modeling of morphogenesis of polyolefin particles: Catalyst fragmentation. AIChE Journal, 2003, 49, 1002-1013.	1.8	49



#	ARTICLE	IF	CITATIONS
136	Transport equations for distillation of ethanol and water from the entropy production rate. <i>Chemical Engineering Science</i> , 2003, 58, 1147-1161.	1.9	21
137	Reactive distillation–pervaporation hybrid column for tert-amyl alcohol etherification with ethanol. <i>Chemical Engineering Science</i> , 2003, 58, 2465-2477.	1.9	40
138	Bifurcation analysis for TAME synthesis in a reactive distillation column: comparison of pseudo-homogeneous and heterogeneous reaction kinetics models. <i>Chemical Engineering and Processing: Process Intensification</i> , 2003, 42, 211-221.	1.8	27
139	Mixed matrix membranes using carbon molecular sieves. <i>Journal of Membrane Science</i> , 2003, 211, 335-348.	4.1	303
140	Verifying reciprocal relations for experimental diffusion coefficients in multicomponent mixtures. <i>Fluid Phase Equilibria</i> , 2003, 208, 291-301.	1.4	13
141	Measurement of effective diffusivity in catalyst-coated monoliths. <i>Catalysis Today</i> , 2003, 83, 85-95.	2.2	32
142	Study on the alkylation of benzene and 1-dodecene. <i>Chemical Engineering Journal</i> , 2003, 93, 191-200.	6.6	20
143	Modelling of reactive separation processes: reactive absorption and reactive distillation. <i>Chemical Engineering and Processing: Process Intensification</i> , 2003, 42, 157-178.	1.8	187
144	Performance comparison of Fick’s, dusty-gas and Stefan–Maxwell models to predict the concentration overpotential of a SOFC anode. <i>Journal of Power Sources</i> , 2003, 122, 9-18.	4.0	360
145	Molecular simulations in zeolitic process design. <i>Chemical Engineering Science</i> , 2003, 58, 557-568.	1.9	123
146	Mesoscopic modeling of transport and reaction in microporous crystalline membranes. <i>Chemical Engineering Science</i> , 2003, 58, 895-901.	1.9	22
147	Enantioselective Hydrolysis of ameso-Diester Using Pig Liver Esterase in a Two-Phase Stirred Tank Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2003, 42, 5516-5525.	1.8	9
148	Diffusion Limitations in the Porous Anodes of SOFCs. <i>Journal of the Electrochemical Society</i> , 2003, 150, A1067.	1.3	158
149	Pervaporation of Toluene/Alcohol Mixtures through a Coextruded Linear Low-Density Polyethylene Membrane. <i>Industrial &amp; Engineering Chemistry Research</i> , 2003, 42, 386-391.	1.8	25
150	Consistency of Energy and Material Balances for Bidisperse Particles in Fixed-Bed Adsorption and Related Applications. <i>Industrial &amp; Engineering Chemistry Research</i> , 2003, 42, 6938-6948.	1.8	18
152	Model-Based Optimal Design of Polymer-Coated Chemical Sensors. <i>Analytical Chemistry</i> , 2003, 75, 1106-1115.	3.2	35
153	Extractive Distillation: A Review. <i>Separation and Purification Reviews</i> , 2003, 32, 121-213.	2.8	341
154	Analysis of the Stefan Tube at Supercritical Conditions and Diffusion Coefficient Measurements. <i>Industrial &amp; Engineering Chemistry Research</i> , 2003, 42, 4389-4397.	1.8	3

#	ARTICLE	IF	CITATIONS
155	Prediction of Ideal Permeability of Hydrocarbons through an MFI-Type Zeolite Membrane by a Combined Method Using Molecular Simulation Techniques and Permeation Theory. <i>Journal of Physical Chemistry B</i> , 2003, 107, 14422-14428.	1.2	27
156	Adsorption ( <i>Chemical Engineering</i> ). , 2003, , 251-271.		4
157	Evaluation of diffusion coefficients in multicomponent mixtures by means of the fluctuation theory. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 320, 211-234.	1.2	18
158	Correlation Effects in Diffusion of CH <sub>4</sub> /CF <sub>4</sub> Mixtures in MFI Zeolite. A Study Linking MD Simulations with the Maxwell-Stefan Formulation. <i>Langmuir</i> , 2003, 19, 7977-7988.	1.6	177
159	Role of molecular diffusion in the theory of gas flow through crimped-capillary leaks. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2003, 21, 806-813.	0.9	8
160	Novel Environmental Sorbents and Methods for their Characterization. , 2003, , 225-298.		0
161	Gas Separations with Carbon Membranes. , 2003, , 469-484.		0
162	Diffusion in Zeolites. , 2003, , .		16
163	Lattice density functional theory of molecular diffusion. <i>Journal of Chemical Physics</i> , 2004, 121, 426.	1.2	50
164	Multicomponent diffusion and sorption analysis of the direct hydroxylation of methyl-aromatics on zeolites. <i>Studies in Surface Science and Catalysis</i> , 2004, 154, 2096-2103.	1.5	2
165	Diffusion in Multicomponent Mixtures. <i>Computer Aided Chemical Engineering</i> , 2004, 19, 205-227.	0.3	5
166	Modeling of equilibration times at high pressure for multicomponent vapor-liquid diffusional processes. <i>Fluid Phase Equilibria</i> , 2004, 226, 15-25.	1.4	8
167	Influence of pH and ionic strength on the metal profile of impregnation catalysts. <i>Chemical Engineering Science</i> , 2004, 59, 1063-1077.	1.9	48
168	Analytic solution of the Maxwell-Stefan equations for multicomponent permeation across a zeolite membrane. <i>Chemical Engineering Journal</i> , 2004, 97, 37-45.	6.6	64
169	A model library for membrane reactors implemented in the process modelling tool ProMoT. <i>Computers and Chemical Engineering</i> , 2004, 28, 319-332.	2.0	17
170	Influence of unequal component efficiencies on trajectories during distillation of a homogeneous azeotropic mixture. <i>Chemical Engineering and Processing: Process Intensification</i> , 2004, 43, 305-316.	1.8	7
171	Structural changes in apple tissue during glucose and sucrose osmotic dehydration: shrinkage, porosity, density and microscopic features. <i>Journal of Food Engineering</i> , 2004, 61, 269-278.	2.7	118
172	Cod desalting process as affected by water management. <i>Journal of Food Engineering</i> , 2004, 61, 353-357.	2.7	24

#	ARTICLE	IF	CITATIONS
173	Reformulation of the solution-diffusion theory of reverse osmosis. <i>Journal of Membrane Science</i> , 2004, 241, 371-386.	4.1	386
174	Fluctuation theory for transport properties in multicomponent mixtures: thermodiffusion and heat conductivity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 332, 151-175.	1.2	24
175	Nonlinear, coupled mass transfer through a dense membrane. <i>Desalination</i> , 2004, 163, 345-354.	4.0	22
176	Multicomponent mass transfer in polymer-coated chemical sensors. <i>Sensors and Actuators B: Chemical</i> , 2004, 99, 273-280.	4.0	1
177	Predictive charge-regulation transport model for nanofiltration from the theory of irreversible processes. <i>Journal of Membrane Science</i> , 2004, 243, 365-377.	4.1	17
178	Effectiveness factor for zeolite catalysed isomerization reactions. <i>Chemical Engineering Journal</i> , 2004, 99, 105-116.	6.6	8
179	Irreversible thermodynamicsâ€”a tool to describe phase transitions far from global equilibrium. <i>Chemical Engineering Science</i> , 2004, 59, 109-118.	1.9	40
180	Multicomponent interphase diffusion of carbon dioxideâ€”methanolâ€”water under near-critical conditions. <i>Chemical Engineering Science</i> , 2004, 59, 1923-1929.	1.9	11
181	Residue curve maps of reactive membrane separation. <i>Chemical Engineering Science</i> , 2004, 59, 2863-2879.	1.9	33
182	Mesoscopic modeling of chemical reactivity. <i>Chemical Engineering Science</i> , 2004, 59, 5559-5567.	1.9	27
183	Diffusion in multicomponent systems: a free energy approach. <i>Chemical Physics</i> , 2004, 302, 21-30.	0.9	12
184	Nonequilibrium modeling of three-phase distillation. <i>Computers and Chemical Engineering</i> , 2004, 28, 2021-2036.	2.0	22
185	Free-Volume Theory Applied to Diffusion in Liquids:Â A Critical Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2004, 43, 6847-6854.	1.8	6
186	Gas and Organic Vapor Permeation through b-Oriented MFI Membranes. <i>Industrial &amp; Engineering Chemistry Research</i> , 2004, 43, 3000-3007.	1.8	101
187	Predicting Benzene Fluxes in NaX Membranes from Atomistic Simulations of Cooperative Diffusivities. <i>Journal of Physical Chemistry B</i> , 2004, 108, 17179-17187.	1.2	7
188	Nonequilibrium Molecular Dynamics Simulations of Diffusion of Binary Mixtures Containing Shortn-Alkanes in Faujasite. <i>Journal of Physical Chemistry B</i> , 2004, 108, 13481-13491.	1.2	108
189	Adsorption phenomena in microporous materials. , 2004, , 25-47.		3
190	Comparison of Adsorption Dynamics in Kinetic and Equilibrium Beds in Hydrogen Ternary System. <i>Separation Science and Technology</i> , 2004, 39, 2951-2976.	1.3	6

#	ARTICLE	IF	CITATIONS
191	Symmetric diffusion equations, barodiffusion, and cross-diffusion in concentrated liquid mixtures. <i>Physical Review E</i> , 2004, 70, 031202.	0.8	15
192	Multicomponent ionic diffusion in porewaters: Coulombic effects revisited. <i>Earth and Planetary Science Letters</i> , 2004, 222, 653-666.	1.8	60
193	Equilibrium and Kinetics of Water Adsorption in Carbon Molecular Sieve: Theory and Experiment. <i>Langmuir</i> , 2004, 20, 8681-8687.	1.6	48
194	Thermodynamic Analysis of Separation Systems. <i>Separation Science and Technology</i> , 2004, 39, 3897-3942.	1.3	73
195	ADSORPTION AND TRANSPORT IN NANOPOROUS MATERIALS. Series on Chemical Engineering, 2004,, 694-726.	0.2	1
196	Modelling and Control of Reactive Distillation Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 31-38.	0.4	1
197	Multi-scale distributed parameter model of an adsorption column using a bond graph approach. <i>Computer Aided Chemical Engineering</i> , 2005, 20, 625-630.	0.3	1
198	Thermodynamic and Kinetic Effects on the Feasible Products of Reactive Distillation: A-zeo-tropes and A-rheo-tropes. , 2005, , 85-148.		0
199	Rigorous dynamic model of a direct methanol fuel cell based on Maxwell's Stefan mass transport equations and a Flory-Huggins activity model: Formulation and experimental validation. <i>Journal of Power Sources</i> , 2005, 145, 435-462.	4.0	46
200	Optimal strategy to model the electrodialytic recovery of a strong electrolyte. <i>Journal of Membrane Science</i> , 2005, 260, 90-111.	4.1	99
201	Feasibility analysis of membrane reactors - discovery of reactive arheotropes. <i>Catalysis Today</i> , 2005, 104, 360-371.	2.2	12
202	The effectiveness factor for zeolite catalysed reactions. <i>Catalysis Today</i> , 2005, 105, 173-179.	2.2	31
203	The second law optimal state of a diabatic binary tray distillation column. <i>Chemical Engineering Science</i> , 2005, 60, 1199-1210.	1.9	35
204	Fractionation of bovine serum albumin and monoclonal antibody alemtuzumab using carrier phase ultrafiltration. <i>Biotechnology and Bioengineering</i> , 2005, 90, 303-315.	1.7	13
205	Toward a unified theory of isotropic molecular transport phenomena. <i>AIChE Journal</i> , 2005, 51, 79-121.	1.8	66
206	Study on suspension catalytic distillation for synthesis of linear alkylbenzene. <i>AIChE Journal</i> , 2005, 51, 845-853.	1.8	12
207	Modelling of the pervaporative flux through hydrophilic membranes. <i>Journal of Chemical Technology and Biotechnology</i> , 2005, 80, 397-405.	1.6	21
208	Estimation of Diffusion Coefficients Based on Adsorption Measurements in Model Extraction Systems. <i>Chemical Engineering and Technology</i> , 2005, 28, 985-990.	0.9	6

#	ARTICLE	IF	CITATIONS
209	Analysis and extension of the theory of multicomponent fluid diffusion. <i>Chemical Engineering Science</i> , 2005, 60, 3129-3167.	1.9	91
210	Inversion of multicomponent diffusion equations. <i>Chemical Engineering Science</i> , 2005, 60, 4359-4367.	1.9	18
211	New Developments in Flow-Through Apparatus for Measurement of Adsorption Mass-Transfer Rates by Frequency Response Method. <i>Adsorption</i> , 2005, 11, 409-414.	1.4	10
212	Extractive distillation. , 2005, , 59-144.		7
213	Thermodynamic fundamentals. , 2005, , 1-58.		5
214	Transport Phenomena in Polymer Electrolyte Membranes. <i>Journal of the Electrochemical Society</i> , 2005, 152, A1804.	1.3	77
215	Testing the consistency of the Maxwell-Stefan formulation when predicting self-diffusion in zeolites with strong adsorption sites. <i>Nanotechnology</i> , 2005, 16, S442-S448.	1.3	22
216	Multiscale coupling in heterogeneous diffusion processes : a port-based approach. , 0, , .		3
217	Investigation of Mixture Diffusion in Nanoporous Adsorbents via the Pressure-Swing Frequency Response Method. 2. Oxygen and Nitrogen in a Carbon Molecular Sieve. <i>Industrial &amp; Engineering Chemistry Research</i> , 2005, 44, 4745-4752.	1.8	19
218	Multicomponent Diffusion in Highly Asymmetric Systems. An Extended Maxwell-Stefan Model for Starkly Different-Sized, Segment-Accessible Chain Molecules. <i>Macromolecules</i> , 2005, 38, 1364-1370.	2.2	54
219	The role of molecular interactions and interfaces in diffusion: Transport diffusivity and evaluation of the Darken approximation. <i>Journal of Chemical Physics</i> , 2005, 123, 184707.	1.2	9
220	Azeotropic Distillation: A Review of Mathematical Models. <i>Separation and Purification Reviews</i> , 2005, 34, 87-129.	2.8	17
221	Modeling of Transport and Transformation Processes in Porous and Multiphase Bodies. <i>Advances in Chemical Engineering</i> , 2005, 30, 137-203.	0.5	40
222	Sedimentation-diffusion equilibrium of binary mixtures of charged colloids including volume effects. <i>Journal of Physics Condensed Matter</i> , 2005, 17, 6337-6352.	0.7	28
223	The Darken Relation for Multicomponent Diffusion in Liquid Mixtures of Linear Alkanes: An Investigation Using Molecular Dynamics (MD) Simulations. <i>Industrial &amp; Engineering Chemistry Research</i> , 2005, 44, 6939-6947.	1.8	155
224	A Mathematical Model for the Chemical Reaction of a Semi-infinite Block of Coal in Underground Coal Gasification. <i>Energy &amp; Fuels</i> , 2005, 19, 1679-1692.	2.5	77
225	Parametric Study of Pressure Swing Adsorption Process To Purify Oxygen Using Carbon Molecular Sieve. <i>Industrial &amp; Engineering Chemistry Research</i> , 2005, 44, 7208-7217.	1.8	27
227	Comparisons of diffusive and viscous contributions to transport coefficients of light gases in single-walled carbon nanotubes. <i>Molecular Simulation</i> , 2005, 31, 643-649.	0.9	79

#	ARTICLE	IF	CITATIONS
228	Modeling Water Adsorption in Carbon Micropores: Study of Water in Carbon Molecular Sieves. <i>Langmuir</i> , 2006, 22, 702-708.	1.6	51
229	Mechanisms and Pathways of Trace Element Mobility in Soils. <i>Advances in Agronomy</i> , 2006, , 111-178.	2.4	142
231	Air separation by single wall carbon nanotubes: Mass transport and kinetic selectivity. <i>Journal of Chemical Physics</i> , 2006, 124, 084702.	1.2	39
232	Electrodialysis Applications in The Food Industry. <i>Advances in Food and Nutrition Research</i> , 2006, 51, 265-360.	1.5	84
233	Describing Binary Mixture Diffusion in Carbon Nanotubes with the Maxwell-Stefan Equations. An Investigation Using Molecular Dynamics Simulations. <i>Industrial &amp; Engineering Chemistry Research</i> , 2006, 45, 2084-2093.	1.8	67
234	Interface Film Resistivities for Heat and Mass Transfers Integral Relations Verified by Non-equilibrium Molecular Dynamics. <i>Journal of Physical Chemistry B</i> , 2006, 110, 18528-18536.	1.2	41
235	Heats of Transfer in the Diffusion Layer before the Surface and the Surface Temperature for a Catalytic Hydrogen Oxidation ( $H_2 + (1/2)O_2 \rightarrow H_2O$ ) Reaction. <i>Journal of Physical Chemistry A</i> , 2006, 110, 4080-4088.	1.1	10
236	A Model for the Configuration Design of a Tubular Solid Oxide Fuel Cell Stack. , 2006, , 455.		2
238	A Maxwell-Stefan-Gouy-Debye model of the concentration profile of a charged solute in the polarisation layer. <i>Desalination</i> , 2006, 192, 356-363.	4.0	11
239	Effects of heterogeneity on diffusion in nanopores From inorganic materials to protein crystals and ion channels. <i>Fluid Phase Equilibria</i> , 2006, 241, 308-316.	1.4	44
240	Description of the pervaporation dehydration performance of A-type zeolite membranes: A modeling approach based on the Maxwell-Stefan theory. <i>Catalysis Today</i> , 2006, 118, 73-84.	2.2	55
241	CEoS aid in evaluation of enthalpy of reaction. <i>Chemical Engineering and Processing: Process Intensification</i> , 2006, 45, 559-567.	1.8	1
242	Generalized linear driving force approximation for adsorption of multicomponent mixtures. <i>Chemical Engineering Science</i> , 2006, 61, 3519-3531.	1.9	34
243	A comprehensive micro-scale model for transport and reaction in intermediate temperature solid oxide fuel cells. <i>Electrochimica Acta</i> , 2006, 51, 3446-3460.	2.6	246
244	Mass, charge and energy transport phenomena in a polymer electrolyte membrane (PEM) used in a direct methanol fuel cell (DMFC): Modelling and experimental validation of fluxes. <i>Journal of Membrane Science</i> , 2006, 276, 272-285.	4.1	50
245	Pervaporation and related properties of time-dependent growth layers of zeolite NaA on structured ceramic supports. <i>Journal of Membrane Science</i> , 2006, 284, 276-290.	4.1	23
246	Probing cooperative jump-diffusion in zeolites: Neutron spin-echo measurements and molecular dynamics simulations of benzene in NaX. <i>Microporous and Mesoporous Materials</i> , 2006, 90, 307-313.	2.2	14
247	Mechanistic modelling of a cathode-supported tubular solid oxide fuel cell. <i>Journal of Power Sources</i> , 2006, 154, 74-85.	4.0	51

#	ARTICLE	IF	CITATIONS
248	Adsorption dynamics of chlorinated hydrocarbons from multi-component aqueous solution onto activated carbon. <i>Journal of Hazardous Materials</i> , 2006, 137, 1479-1487.	6.5	23
249	Integral relations for the heat and mass transfer resistivities of the liquid-vapor interface. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 370, 258-274.	1.2	23
250	Effect of the nonuniformity of the inlet liquid distribution on the trickle-bed reactor output in an exothermic reaction accompanied by evaporation. <i>Theoretical Foundations of Chemical Engineering</i> , 2006, 40, 472-482.	0.2	1
251	On the modified Stefan-Maxwell equation for isothermal multicomponent gaseous diffusion. <i>Chemical Engineering Science</i> , 2006, 61, 5021-5029.	1.9	32
252	Binary, coupled mass transfer with variable diffusivity through cylindrical dense membrane. <i>Journal of Membrane Science</i> , 2006, 274, 159-168.	4.1	21
253	Separation of Ethylene Glycol/Water Mixtures using NaA Zeolite Membranes. <i>Chemical Engineering and Technology</i> , 2006, 29, 1340-1346.	0.9	41
254	MD Simulations of Diffusivities in Methanol-n-hexane Mixtures Near the Liquid-liquid Phase Splitting Region. <i>Chemical Engineering and Technology</i> , 2006, 29, 516-519.	0.9	12
255	An Electrochemical Model of a Solid Oxide Steam Electrolyzer for Hydrogen Production. <i>Chemical Engineering and Technology</i> , 2006, 29, 636-642.	0.9	85
256	Validating the Darken Relation for Diffusivities in Fluid Mixtures of Varying Densities by Use of MD Simulations. <i>Chemical Engineering and Technology</i> , 2006, 29, 761-765.	0.9	13
257	Dynamics of reaction separation processes in the limit of chemical equilibrium. <i>AIChE Journal</i> , 2006, 52, 1010-1026.	1.8	16
258	Modeling hydrogen separation in high temperature silica membrane systems. <i>AIChE Journal</i> , 2006, 52, 1729-1735.	1.8	13
259	Microstructural Optimization of Anode-Supported Solid Oxide Fuel Cells by a Comprehensive Microscale Model. <i>Journal of the Electrochemical Society</i> , 2006, 153, A406.	1.3	116
260	THE MAXWELL-STEFAN FORMULATION OF DIFFUSION IN ZEOLITES. , 2006, , 211-240.		2
261	Thermodynamic Driving Force for Molecular Diffusion - Lattice Density Functional Theory Predictions. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2006, 31, .	2.4	14
262	A Model for Mass Transport of Molten Alkali Carbonate Mixtures Applied to the MCFC. <i>Journal of the Electrochemical Society</i> , 2006, 153, A2111.	1.3	11
263	Water ingress in Y-type zeolite: Anomalous moisture-dependent transport diffusivity. <i>Physical Review E</i> , 2006, 74, 041108.	0.8	14
264	Investigating mass transport in zeolite pores by tuning the framework polarity. <i>Studies in Surface Science and Catalysis</i> , 2007, , 942-948.	1.5	5
265	ADSORPTION KINETICS: THEORY, APPLICATIONS AND RECENT PROGRESS. , 2007, , .		1



#	ARTICLE	IF	CITATIONS
266	CFD modeling of columns equipped with structured packings: I. Approach based on detailed packing geometry. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2007, 2, 336-344.	0.8	13
268	Effect of transition from slip to free molecular flow on gas transport in porous media. <i>Journal of Applied Physics</i> , 2007, 102, .	1.1	36
269	Modeling of Reactive Distillation. , 0, , 323-363.		7
270	Diffusion in Zeolite Molecular Sieves. <i>Studies in Surface Science and Catalysis</i> , 2007, 168, 737-785.	1.5	9
271	Methane oxidation over mixed-conducting SrFe(Al)O <sub>3</sub> ~Îr~SrAl <sub>2</sub> O <sub>4</sub> composite. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 2744-2752.	1.3	14
272	Incorporating the Loading Dependence of the Maxwell~Stefan Diffusivity in the Modeling of CH <sub>4</sub> and CO <sub>2</sub> Permeation Across Zeolite Membranes. <i>Industrial &amp; Engineering Chemistry Research</i> , 2007, 46, 2974-2986.	1.8	63
273	Physical Adsorption Analysis of Intact Supported MFI Zeolite Membranes. <i>Langmuir</i> , 2007, 23, 8371-8384.	1.6	10
274	Multicomponent Diffusion Modeling in Clay Systems with Application to the Diffusion of Tritium, Iodide, and Sodium in Opalinus Clay. <i>Environmental Science &amp; Technology</i> , 2007, 41, 5002-5007.	4.6	217
275	On the Driving Force of Methanol Pervaporation through a Microporous Methylated Silica Membrane. <i>Industrial &amp; Engineering Chemistry Research</i> , 2007, 46, 4091-4099.	1.8	22
276	Advective and diffusive contributions to reactive gas transport during pyrite oxidation in the unsaturated zone. <i>Water Resources Research</i> , 2007, 43, .	1.7	30
277	Numerical Modeling of the Dynamic Transport of Multi-Component Exhaust Gases in Oxygen Sensors. , 0, , .		3
279	Mass transfer in coal seams for CO <sub>2</sub> sequestration. <i>AIChE Journal</i> , 2007, 53, 1028-1049.	1.8	41
280	Modeling nanofiltration with Nernst-Planck approach and polarization layer. <i>AIChE Journal</i> , 2007, 53, 1952-1969.	1.8	64
282	Structured parallel diffusion model for intraparticle mass transport of proteins to porous adsorbent. <i>Biochemical Engineering Journal</i> , 2007, 37, 298-310.	1.8	29
283	A simplified dynamic model for accelerated methane residual recovery from coals. <i>Chemical Engineering Science</i> , 2007, 62, 3268-3275.	1.9	15
284	Chemical simulation of multicomponent gas diffusion and flow in coals for $\frac{dC_i}{dt} = D_{eff} \nabla^2 C_i - R_i$	1.9	62
285	Application of the Maxwell~Stefan approach to ion exchange in microporous materials. Batch process modelling. <i>Chemical Engineering Science</i> , 2007, 62, 6939-6946.	1.9	15
286	Parametric study of solid oxide steam electrolyzer for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2007, 32, 2305-2313.	3.8	174



#	ARTICLE	IF	CITATIONS
287	Integral relations, a simplified method to find interfacial resistivities for heat and mass transfer. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 385, 421-432.	1.2	9
288	Prediction of permeation behavior of CO <sub>2</sub> and CH <sub>4</sub> through silicalite-1 membranes in single-component or binary mixture systems using occupancy-dependent Maxwell-Stefan diffusivities. <i>Journal of Membrane Science</i> , 2007, 306, 267-276.	4.1	18
289	Numerical modeling of an anode-supported SOFC button cell considering anodic surface diffusion. <i>Journal of Power Sources</i> , 2007, 164, 639-648.	4.0	113
290	Thermal effects during adsorption of n-butane on a silicalite-1 membrane: A non-equilibrium molecular dynamics study. <i>Journal of Colloid and Interface Science</i> , 2007, 313, 563-573.	5.0	14
291	A model for mass transport in the electrolyte membrane of a DMFC. <i>Journal of Applied Electrochemistry</i> , 2007, 37, 429-438.	1.5	7
292	Non-equilibrium molecular dynamics simulation study on permeation phenomena of LJ particles in slit-shaped membranes with periodic belt-like heterogeneous surfaces. <i>Fluid Phase Equilibria</i> , 2007, 257, 190-194.	1.4	2
293	A model for the performance of microporous mixed matrix membranes with oriented selective flakes. <i>Journal of Membrane Science</i> , 2007, 295, 50-70.	4.1	56
294	Prediction of the concentration polarization in the nanofiltration/reverse osmosis of dilute multi-ionic solutions. <i>Journal of Membrane Science</i> , 2007, 300, 20-27.	4.1	50
295	Gas permeation characteristics of heterogeneous ODPA-BIS P polyimide membranes at different temperatures. <i>Journal of Membrane Science</i> , 2007, 305, 160-168.	4.1	21
296	Theoretical analysis of reversible solid oxide fuel cell based on proton-conducting electrolyte. <i>Journal of Power Sources</i> , 2008, 177, 369-375.	4.0	54
297	Pore network model of transport and separation of binary gas mixtures in nanoporous membranes. <i>Journal of Membrane Science</i> , 2008, 315, 48-57.	4.1	35
298	Modelling mass transport in solid oxide fuel cell anodes: a case for a multidimensional dusty gas-based model. <i>Chemical Engineering Science</i> , 2008, 63, 5626-5638.	1.9	81
299	Separation and permeation characteristics of a DD3R zeolite membrane. <i>Journal of Membrane Science</i> , 2008, 316, 35-45.	4.1	244
300	Analysis of mass transport models based on Maxwell-Stefan theory and Fick's law for protein uptake to porous anion exchanger. <i>Separation and Purification Technology</i> , 2008, 60, 180-189.	3.9	32
301	Pervaporation separation of toluene/alcohol mixtures using silicalite zeolite embedded chitosan mixed matrix membranes. <i>Separation and Purification Technology</i> , 2008, 62, 128-136.	3.9	65
302	Predictive modeling of ionic permselectivity of porous media. <i>Computers and Chemical Engineering</i> , 2008, 32, 125-134.	2.0	6
303	Protein adsorption dynamics in cation-exchange chromatography quantitatively studied by confocal laser scanning microscopy. <i>Chemical Engineering Science</i> , 2008, 63, 4045-4054.	1.9	27
304	Modelling the liquid-phase adsorption in packed beds at low Reynolds numbers: An improved hydrodynamic model. <i>Chemical Engineering Science</i> , 2008, 63, 4203-4217.	1.9	15

#	ARTICLE	IF	CITATIONS
305	Analysis of processes in planar solid oxide fuel cells. <i>Solid State Ionics</i> , 2008, 179, 1579-1587.	1.3	7
306	Mass transport with varying diffusion- and solubility coefficient through a catalytic membrane layer. <i>Chemical Engineering Research and Design</i> , 2008, 86, 723-730.	2.7	15
307	Electrochemical modeling of hydrogen production by proton-conducting solid oxide steam electrolyzer. <i>International Journal of Hydrogen Energy</i> , 2008, 33, 4040-4047.	3.8	62
308	Dehydration performance of a hydrophobic DD3R zeolite membrane. <i>Journal of Membrane Science</i> , 2008, 321, 344-349.	4.1	69
309	Estimation of Morphology Characteristics of Porous Poly(propylene) Particles from Degassing Measurements. <i>Macromolecular Reaction Engineering</i> , 2008, 2, 176-189.	0.9	9
310	On the manifestation of multi-component diffusion in a laminar boundary layer with foreign blowing. <i>Thermophysics and Aeromechanics</i> , 2008, 15, 477-482.	0.1	4
311	Nanoprecipitation-assisted ion current oscillations. <i>Nature Nanotechnology</i> , 2008, 3, 51-57.	15.6	152
312	Molecular Dynamics Simulations of Oxygen Transport through a Fully Atomistic Polyimide Membrane. <i>Macromolecules</i> , 2008, 41, 2711-2721.	2.2	48
313	Fundamentals of Adsorption Equilibrium and Kinetics in Microporous Solids. , 2006, , 1-43.		52
314	Protein Diffusion on Charged Membranes: A Dynamic Mean-Field Model Describes Time Evolution and Lipid Reorganization. <i>Biophysical Journal</i> , 2008, 94, 2580-2597.	0.2	49
315	Friction based modeling of multicomponent transport at the nanoscale. <i>Journal of Chemical Physics</i> , 2008, 129, 164709.	1.2	23
316	Multiscale Mass Transport in Porous Silicon Gas Sensors. <i>Modern Aspects of Electrochemistry</i> , 2008, , 1-30.	0.2	1
317	Molecular Simulations of Zeolites: Adsorption, Diffusion, and Shape Selectivity. <i>Chemical Reviews</i> , 2008, 108, 4125-4184.	23.0	655
318	Analysis of Water Transmembrane Profiles and Ionic Transport during Proton Exchange Membrane Fuel Cell Transient Behavior. <i>Industrial &amp; Engineering Chemistry Research</i> , 2008, 47, 4481-4489.	1.8	1
319	Diffusion in Microporous Membranes: Measurements and Modeling. <i>Industrial &amp; Engineering Chemistry Research</i> , 2008, 47, 5797-5811.	1.8	29
320	Effects of the Temperature Bulge in CO <sub>2</sub> Absorption from Flue Gas by Aqueous Monoethanolamine. <i>Industrial &amp; Engineering Chemistry Research</i> , 2008, 47, 867-875.	1.8	181
321	Diffusion and Separation of CO <sub>2</sub> and CH <sub>4</sub> in Silicalite, C <sub>168</sub> Schwarzite, and IRMOF-1: A Comparative Study from Molecular Dynamics Simulation. <i>Langmuir</i> , 2008, 24, 5474-5484.	1.6	140
322	Pervaporation and Gas Separation Using Microporous Membranes. <i>Membrane Science and Technology</i> , 2008, 13, 217-253.	0.5	8

#	ARTICLE	IF	CITATIONS
323	Mixture Diffusion in Nanoporous Adsorbents: Equivalence of Fickian and Maxwell-Stefan Approaches. <i>Journal of Physical Chemistry B</i> , 2008, 112, 8600-8604.	1.2	24
324	Modeling Pervaporation of Ethanol/Water Mixtures within 'Real' Zeolite NaA Membranes. <i>Industrial &amp; Engineering Chemistry Research</i> , 2008, 47, 3213-3224.	1.8	47
325	Microporous inorganic membranes for high temperature hydrogen purification. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	86
326	Modeling the Transient Adsorption Process of Ternary Mixtures on Nanoporous Zeolitic Adsorbents in Batch Systems. <i>Separation Science and Technology</i> , 2008, 43, 862-885.	1.3	0
327	Thermal Diffusion and Partial Molar Enthalpy Variations of n-Butane in Silicalite-1. <i>Journal of Physical Chemistry B</i> , 2008, 112, 14937-14951.	1.2	16
328	New Thermal Diffusion Coefficient Measurements for Hydrocarbon Binary Mixtures: Viscosity and Composition Dependency. <i>Journal of Physical Chemistry B</i> , 2008, 112, 6442-6447.	1.2	23
330	Simulation of Electrochemical Impedance Spectra of Solid Oxide Fuel Cells Using Transient Physical Models. <i>Journal of the Electrochemical Society</i> , 2008, 155, B270.	1.3	33
332	Entropy Generation Minimization in a Tubular Solid Oxide Fuel Cell. , 2008, , .		1
333	On Modeling Multi-Component Diffusion Inside the Porous Anode of Solid Oxide Fuel Cells Using Fick's Model. , 2008, , .		1
334	Energy-preserving method for spatial discretization: application to an adsorption column. <i>Computer Aided Chemical Engineering</i> , 2008, , 727-732.	0.3	0
335	Josef Stefan and His Contributions to Heat Transfer. , 2008, , .		2
336	A Microscale Modeling Tool for the Design and Optimization of Solid Oxide Fuel Cells. <i>Energies</i> , 2009, 2, 427-444.	1.6	22
337	Lattice Boltzmann scheme for mixture modeling: Analysis of the continuum diffusion regimes recovering Maxwell-Stefan model and incompressible Navier-Stokes equations. <i>Physical Review E</i> , 2009, 80, 056701.	0.8	18
339	LATTICE BOLTZMANN SIMULATION FOR VARIOUS GEOMETRIES OF SOLID OXIDE FUEL CELLS. <i>Modern Physics Letters B</i> , 2009, 23, 273-276.	1.0	2
340	Port-based modelling of mass transport phenomena. <i>Mathematical and Computer Modelling of Dynamical Systems</i> , 2009, 15, 233-254.	1.4	24
341	Development of a Detailed Planar Solid Oxide Fuel Cell Computational Fluid Dynamics Model for Analyzing Cell Performance Degradation. <i>Journal of Fuel Cell Science and Technology</i> , 2009, 6, .	0.8	8
342	Modeling the Loading Dependency of Diffusion in Zeolites: the Relevant Site Model Extended to Mixtures in DDR-Type Zeolite. <i>Journal of Physical Chemistry C</i> , 2009, 113, 21856-21865.	1.5	28
343	Molecular Dynamics of Carbon Dioxide, Methane and Their Mixtures in a Zeolite Possessing Two Independent Pore Networks as Revealed by Computer Simulations. <i>Journal of Physical Chemistry B</i> , 2009, 113, 13761-13767.	1.2	18

#	ARTICLE	IF	CITATIONS
344	Three-Dimensional Numerical Simulation of Ni-YSZ Anode Polarization Using Reconstructed Microstructure from FIB-SEM Images. <i>ECS Transactions</i> , 2009, 25, 1829-1836.	0.3	9
345	The effects of scale and spatial heterogeneities on diffusion in volcanic breccias and basalts: Amchitka Island, Alaska. <i>Journal of Contaminant Hydrology</i> , 2009, 106, 150-165.	1.6	3
346	Modeling and simulation of polymeric nanocapsule formation by emulsion diffusion method. <i>AIChE Journal</i> , 2009, 55, 2094-2105.	1.8	19
347	Multicomponent Mass Transfer Model for Supercritical Extraction: Application to Isopropyl Alcohol Production. <i>Chemical Engineering and Technology</i> , 2009, 32, 1384-1391.	0.9	2
348	Separation by pervaporation of ethanol from aqueous solutions and effect of other components present in fermentation broths. <i>Journal of Chemical Technology and Biotechnology</i> , 2009, 84, 1873-1882.	1.6	52
349	Experimental determination of concentration-dependent carbon dioxide diffusivity in LDPE. <i>Journal of Applied Polymer Science</i> , 2009, 111, 380-387.	1.3	8
350	Insulin adsorption into porous charged membranes: Effect of the electrostatic interaction. <i>Biotechnology Progress</i> , 2009, 25, 1115-1121.	1.3	4
351	Insulin transport across porous charged membranes: Effect of the electrostatic interaction. <i>Biotechnology Progress</i> , 2009, 25, 1379-1386.	1.3	5
352	An improved one-dimensional membrane-electrode assembly model to predict the performance of solid oxide fuel cell including the limiting current density. <i>Journal of Power Sources</i> , 2009, 186, 417-427.	4.0	66
353	A transient analysis of a micro-tubular solid oxide fuel cell (SOFC). <i>Journal of Power Sources</i> , 2009, 194, 864-872.	4.0	41
354	A semi-empirical approach for predicting the performance of mixed matrix membranes containing selective flakes. <i>Journal of Membrane Science</i> , 2009, 326, 595-607.	4.1	38
355	A non-equilibrium thermodynamics approach to model mass and heat transport for water pervaporation through a zeolite membrane. <i>Journal of Membrane Science</i> , 2009, 330, 388-398.	4.1	37
356	Simulation of protein ultrafiltration using CFD: Comparison of concentration polarisation and fouling effects with filtration and protein adsorption experiments. <i>Journal of Membrane Science</i> , 2009, 337, 1-8.	4.1	38
357	A multi-scale model for CO <sub>2</sub> sequestration enhanced coalbed methane recovery. <i>Frontiers of Chemical Engineering in China</i> , 2009, 3, 20-25.	0.6	2
358	Chemistry in nanochannel confinement. <i>Analytical and Bioanalytical Chemistry</i> , 2009, 394, 385-397.	1.9	40
359	Loschmidt, Stefan, and Stigler's Law of Eponymy. <i>Physics in Perspective</i> , 2009, 11, 357-378.	0.2	2
360	Dynamic Monte Carlo simulations of binary self-diffusion in ZSM-5. <i>Microporous and Mesoporous Materials</i> , 2009, 125, 149-159.	2.2	21
361	Comparative study of sorption and permeation techniques for the determination of heptane and toluene transport in polyethylene membranes. <i>Journal of Membrane Science</i> , 2009, 338, 161-174.	4.1	56

#	ARTICLE	IF	CITATIONS
362	Performance and stability of multi-channel MFI zeolite membranes detemplated by calcination and ozonation in ethanol/water pervaporation. <i>Journal of Membrane Science</i> , 2009, 339, 261-274.	4.1	49
363	Tuning the framework polarity in MFI membranes by deboronation: Effect on mass transport. <i>Microporous and Mesoporous Materials</i> , 2009, 125, 39-45.	2.2	5
364	On modeling multi-component diffusion inside the porous anode of solid oxide fuel cells using Fick's model. <i>Journal of Power Sources</i> , 2009, 192, 467-474.	4.0	40
365	Effects of operating conditions on the performance of a micro-tubular solid oxide fuel cell (SOFC). <i>Journal of Power Sources</i> , 2009, 192, 414-422.	4.0	47
366	Three-dimensional modeling of planar solid oxide fuel cells and the rib design optimization. <i>Journal of Power Sources</i> , 2009, 194, 854-863.	4.0	62
367	Structure-preserving infinite dimensional model reduction: Application to adsorption processes. <i>Journal of Process Control</i> , 2009, 19, 394-404.	1.7	29
368	Coupling a mathematical and a fuzzy logic-based model for prediction of zinc ions separation from wastewater using electro dialysis. <i>Chemical Engineering Journal</i> , 2009, 151, 262-274.	6.6	32
369	Numerical algorithm for modeling of reactive separation column with fast chemical reaction. <i>Chemical Engineering Journal</i> , 2009, 150, 252-260.	6.6	6
370	Comparison of external mass transfer approaches for heterogeneously catalyzed hydrogenation of vaporized hydrocarbons. <i>Chemical Engineering Journal</i> , 2009, 154, 120-130.	6.6	2
371	Cadmium(II) removal from aqueous solution using microporous titanosilicate ETS-10. <i>Chemical Engineering Journal</i> , 2009, 155, 108-114.	6.6	23
372	Multicomponent mass transfer in films and rigid drops: The influence of concentration-variable diffusivity. <i>Chemical Engineering Science</i> , 2009, 64, 433-442.	1.9	9
373	An investigation of the characteristics of Maxwell-Stefan diffusivities of binary mixtures in silica nanopores. <i>Chemical Engineering Science</i> , 2009, 64, 870-882.	1.9	77
374	Impact of mathematical model selection on prediction of steady state and dynamic behaviour of a reactive distillation column. <i>Computers and Chemical Engineering</i> , 2009, 33, 788-793.	2.0	13
375	Mass transport through anisotropic membrane layer. <i>Desalination</i> , 2009, 240, 54-63.	4.0	7
376	Anatomy of particle diffusion. <i>European Journal of Physics</i> , 2009, 30, 1447-1470.	0.3	13
377	Modeling the Loading Dependency of Diffusion in Zeolites: The Relevant Site Model. <i>Journal of Physical Chemistry C</i> , 2009, 113, 17840-17850.	1.5	37
378	Cross-diffusion and pattern formation in reaction-diffusion systems. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 897-912.	1.3	234
379	Adsorption and Diffusion of Water, Methanol, and Ethanol in All-Silica DD3R: Experiments and Simulation. <i>Journal of Physical Chemistry C</i> , 2009, 113, 14290-14301.	1.5	69

#	ARTICLE	IF	CITATIONS
380	Interdiffusion in liquid Al–Cu and Ni–Cu alloys. <i>Journal of Chemical Physics</i> , 2009, 131, 044502.	1.2	27
381	Oxygen Sorption in Glassy Polymers Studied at the Molecular Level. <i>Macromolecules</i> , 2009, 42, 8521-8533.	2.2	32
382	Comparison of modeling methods for the determination of effective porosities and diffusion coefficients in through-diffusion tests. <i>Water Resources Research</i> , 2009, 45, .	1.7	8
383	Coupling effect during vapour permeation of organic mixtures through polymeric membranes. <i>Desalination and Water Treatment</i> , 2010, 14, 47-51.	1.0	1
384	Diffusion models of multicomponent mixtures in the lung. <i>ESAIM: Proceedings and Surveys</i> , 2010, 30, 90-103.	0.4	14
385	Membrane reactor modelling, validation and simulation for the WGS reaction using metal doped silica membranes. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2010, 5, 83-92.	0.8	19
386	Reconciling the Relevant Site Model and dynamically corrected Transition State Theory. <i>Chemical Physics Letters</i> , 2010, 495, 77-79.	1.2	4
387	Modelling gas permeation through new microporous titanosilicate AM-3 membranes. <i>Chemical Engineering Journal</i> , 2010, 165, 395-404.	6.6	16
388	Diffusion in zeolites: Extension of the relevant site model to light gases and mixtures thereof in zeolites DDR, CHA, MFI and FAU. <i>Separation and Purification Technology</i> , 2010, 73, 151-163.	3.9	13
389	Influence of NO <sub>x</sub> adsorbed species on component permeation through ZSM-5 membranes. <i>Journal of Membrane Science</i> , 2010, 349, 83-89.	4.1	9
390	Network model for the evolution of the pore structure of silicon-carbide membranes during their fabrication. <i>Journal of Membrane Science</i> , 2010, 356, 138-146.	4.1	30
391	High temperature permeation and separation characteristics of an all-silica DDR zeolite membrane. <i>Microporous and Mesoporous Materials</i> , 2010, 132, 137-147.	2.2	102
392	Modeling of Mass Transfer in Nonideal Multicomponent Mixture with Maxwell-Stefan Approach. <i>Chinese Journal of Chemical Engineering</i> , 2010, 18, 362-371.	1.7	5
394	Modellierung von Adsorption, Diffusion und katalysierten Reaktionen in porösen Medien. <i>Chemie-Ingenieur-Technik</i> , 2010, 82, 881-890.	0.4	4
395	Modellierung eines Wirbelschichtreaktors für die Herstellung von Carbon Nanotubes. <i>Chemie-Ingenieur-Technik</i> , 2010, 82, 1352-1353.	0.4	0
396	Separation and isomerization of xylenes using zeolite membranes: a short overview. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2010, 5, 815-837.	0.8	47
397	Modeling and experimental studies on combustion characteristics of porous coal char: Volume reaction model. <i>International Journal of Chemical Kinetics</i> , 2010, 42, 299-315.	1.0	18
398	Prediction of gas permeability in mixed matrix membranes using theoretical models. <i>Journal of Membrane Science</i> , 2010, 347, 53-61.	4.1	102

#	ARTICLE	IF	CITATIONS
399	Separation of methanol and ethanol from synthesis gas using MFI membranes. <i>Journal of Membrane Science</i> , 2010, 360, 265-275.	4.1	34
400	Elementary reaction kinetic model of an anode-supported solid oxide fuel cell fueled with syngas. <i>Journal of Power Sources</i> , 2010, 195, 2266-2282.	4.0	49
401	Combined micro-scale and macro-scale modeling of the composite electrode of a solid oxide fuel cell. <i>Journal of Power Sources</i> , 2010, 195, 6598-6610.	4.0	66
402	CO <sub>2</sub> sequestration in coals and enhanced coalbed methane recovery: New numerical approach. <i>Fuel</i> , 2010, 89, 1110-1118.	3.4	27
403	Effects of matrix moisture on gas diffusion and flow in coal. <i>Fuel</i> , 2010, 89, 3207-3217.	3.4	428
404	Modeling the cation transport in an operating polymer electrolyte fuel cell (PEFC). <i>International Journal of Hydrogen Energy</i> , 2010, 35, 5539-5551.	3.8	28
405	Mass transfer in hydrogen-fed anode-supported SOFCs. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 11551-11560.	3.8	12
406	A micro/macroscale model for intermediate temperature solid oxide fuel cells with prescribed fully-developed axial velocity profiles in gas channels. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 11890-11907.	3.8	24
407	Application of the Nernst-Planck approach to model the electro-dialytic recovery of disodium itaconate. <i>Journal of Membrane Science</i> , 2010, 349, 393-404.	4.1	28
408	Convective and diffusive mass transport through anisotropic, capillary membrane. <i>Chemical Engineering and Processing: Process Intensification</i> , 2010, 49, 716-721.	1.8	5
409	Review of 3D CFD modeling of flow and mass transfer in narrow spacer-filled channels in membrane modules. <i>Chemical Engineering and Processing: Process Intensification</i> , 2010, 49, 759-781.	1.8	252
410	Modeling residue hydrotreating. <i>Chemical Engineering Science</i> , 2010, 65, 322-329.	1.9	20
411	Numerical simulation of mass transfer in circulating drops. <i>Chemical Engineering Science</i> , 2010, 65, 2934-2956.	1.9	27
412	The continuum mechanical theory of multicomponent diffusion in fluid mixtures. <i>Chemical Engineering Science</i> , 2010, 65, 5976-5989.	1.9	36
413	Mathematical modeling of a novel tubular micro-solid oxide fuel cell and experimental validation. <i>Chemical Engineering Science</i> , 2010, 65, 6001-6013.	1.9	10
414	Pervaporation of binary water-alcohol and methanol-alcohol mixtures through microporous methylated silica membranes: Maxwell-Stefan modeling. <i>Computers and Chemical Engineering</i> , 2010, 34, 1775-1788.	2.0	34
415	Numerical simulation and experimental studies on heat and mass transfer using sweeping gas membrane distillation. <i>Desalination</i> , 2010, 259, 84-96.	4.0	98
417	New Directions in Simulation, Control and Analysis for Interfaces and Free Boundaries. <i>Oberwolfach Reports</i> , 2010, 7, 253-324.	0.0	0



#	ARTICLE	IF	CITATIONS
418	Rigorous Multicomponent Reactive Separations Modelling: Complete Consideration of Reaction-Diffusion Phenomena. Oil and Gas Science and Technology, 2010, 65, 735-749.	1.4	2
422	Study on Wellsite Toxic Gas Leakage and Dispersion of High Temperature High Pressure Gas Wells with High Sulfur Content. International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering, 2010, , .	0.0	1
423	Numerical Assessment of SOFC Anode Polarization Based on Three-Dimensional Model Microstructure Reconstructed from FIB-SEM Images. Journal of the Electrochemical Society, 2010, 157, B665.	1.3	151
424	Kinetic Bhatnagar-Gross-Krook model for fast reactive mixtures and its hydrodynamic limit. Physical Review E, 2010, 81, 036327.	0.8	27
425	Entropy Generation Minimization in a Tubular Solid Oxide Fuel Cell. Journal of Energy Resources Technology, Transactions of the ASME, 2010, 132, .	1.4	17
427	Modeling Permeation of CO <sub>2</sub> /CH <sub>4</sub> , N <sub>2</sub> /CH <sub>4</sub> , and CO <sub>2</sub> /Air Mixtures across a DD3R Zeolite Membrane. Journal of Physical Chemistry C, 2010, 114, 9379-9389.	1.5	35
428	Modeling and Simulation of Membrane Structure and Transport Properties. , 2010, , 29-74.		6
429	“Profile Method” for the Measurement of kLa and kVa in Distillation Columns. Validation of Rate-Based Distillation Models Using Concentration Profiles Measured along the Column. Industrial & Engineering Chemistry Research, 2010, 49, 4383-4398.	1.8	18
430	A Dusty Fluid Model for Predicting Hydroxyl Anion Conductivity in Alkaline Anion Exchange Membranes. Journal of the Electrochemical Society, 2010, 157, B327.	1.3	157
431	Rate-Based Modeling Approach and Simulation for Molecular Distillation of Green Coffee Oil. Computer Aided Chemical Engineering, 2010, 28, 259-264.	0.3	10
432	Transient Diffusion within Spherical Particles: Numerical Resolution of the Maxwell-Stefan Formulation. Industrial & Engineering Chemistry Research, 2010, 49, 5654-5660.	1.8	6
433	On the Maxwell-Stefan Approach to Diffusion: A General Resolution in the Transient Regime for One-Dimensional Systems. Journal of Physical Chemistry B, 2010, 114, 151-164.	1.2	24
434	Cathode Polarizations of a Cathode-Supported Solid Oxide Fuel Cell. Journal of the Electrochemical Society, 2010, 157, B1471.	1.3	13
435	Revised Model for Molecular Diffusion and Advection. Vadose Zone Journal, 2010, 9, 85.	1.3	4
436	Modeling Pure Gas Permeation in Nanoporous Materials and Membranes. Langmuir, 2010, 26, 8373-8385.	1.6	41
437	Design of an Experimental Setup to Study Mass Transport in Micro-Nano Capillaries and Porous Media. , 2010, , .		1
439	Experimental Determination of Composition-Dependent Diffusivity of Carbon Dioxide in Polypropylene. Journal of Chemical & Engineering Data, 2011, 56, 21-26.	1.0	15
440	Multicomponent Maxwell-Stefan Diffusivities at Infinite Dilution. Industrial & Engineering Chemistry Research, 2011, 50, 4776-4782.	1.8	50



#	ARTICLE	IF	CITATIONS
441	Maxwell–Stefan Diffusivities in Binary Mixtures of Ionic Liquids with Dimethyl Sulfoxide (DMSO) and $H_2O$ . Journal of Physical Chemistry B, 2011, 115, 8506-8517.	1.2	35
442	Geometry-Dependent Oxygen Diffusion Flux and Limiting Current Density of the Cathode in a Cathode-Supported Solid Oxide Fuel Cell. Journal of the Electrochemical Society, 2011, 158, B84.	1.3	3
443	On coupled Lane-Emden equations arising in dusty fluid models. Journal of Physics: Conference Series, 2011, 268, 012006.	0.3	36
445	Calculating Thermodynamic Properties from Fluctuations at Small Scales. Journal of Physical Chemistry B, 2011, 115, 10911-10918.	1.2	105
446	Parabolic Problems. Progress in Nonlinear Differential Equations and Their Application, 2011, , .	0.4	3
447	Molecular transport in nanopores: a theoretical perspective. Physical Chemistry Chemical Physics, 2011, 13, 15350.	1.3	137
448	The role of molecular modeling in confined systems: impact and prospects. Physical Chemistry Chemical Physics, 2011, 13, 58-85.	1.3	153
449	Fick Diffusion Coefficients of Liquid Mixtures Directly Obtained From Equilibrium Molecular Dynamics. Journal of Physical Chemistry B, 2011, 115, 12921-12929.	1.2	70
450	Impact of Mass Transfer on Modelling and Simulation of Reactive Distillation Columns. , 2011, , .		1
451	A Review of Mass Transfer Controlling the Reaction Rate in Heterogeneous Catalytic Systems. , 0, , .		58
452	A solid oxide fuel cell micro-scale modeling with spherical particle shaped electrodes. EPJ Applied Physics, 2011, 54, 23411.	0.3	3
453	Modeling of multicomponent mass transfer across polymer films using a thermodynamically consistent formulation of the Maxwell–Stefan equations in terms of volume fractions. Polymer, 2011, 52, 3970-3983.	1.8	44
454	Design improvement of circular molten carbonate fuel cell stack through CFD Analysis. Applied Thermal Engineering, 2011, 31, 2740-2748.	3.0	19
455	A numerical study of a two property catalyst/sorbent pellet design for the sorption-enhanced steam–methane reforming process: Modeling complexity and parameter sensitivity study. Chemical Engineering Journal, 2011, 178, 407-422.	6.6	54
456	Analysis of the Development of Membrane Technology for Gas Separation and $CO_2$ Capture. ACS Symposium Series, 2011, , 7-26.	0.5	6
457	Proper Modeling of Diffusion in Fractured Reservoirs. , 2011, , .		17
458	Modified multi-component gas transport formulation with phoretic effects. Microfluidics and Nanofluidics, 2011, 11, 725-742.	1.0	1
459	Combined Experimental and Mathematical Approach for Development of Microfabrication-Based Cancer Migration Assay. Annals of Biomedical Engineering, 2011, 39, 2346-2359.	1.3	7

#	ARTICLE	IF	CITATIONS
460	New expressions for single and binary permeation through zeolite membranes for different isotherm models. <i>Journal of Membrane Science</i> , 2011, 367, 21-32.	4.1	31
461	A review on transport of coal seam gas and its impact on coalbed methane recovery. <i>Frontiers of Chemical Science and Engineering</i> , 2011, 5, 139-161.	2.3	26
462	Calculation of multiplicity of steady states in a catalyst pellet by homotopic continuation method. <i>AIChE Journal</i> , 2011, 57, 473-481.	1.8	4
463	Liquid phase diffusion of branched alkanes in silicalite. <i>AIChE Journal</i> , 2011, 57, 319-332.	1.8	8
464	Determination of activities in membrane processes: The UNIQUAC model expressed in mole and mass fractions. <i>AIChE Journal</i> , 2011, 57, 1889-1896.	1.8	4
465	Microscale Modeling of an Anode-Supported Planar Solid Oxide Fuel Cell. <i>Fuel Cells</i> , 2011, 11, 184-199.	1.5	19
466	Experimental Investigations and Modeling of Direct Internal Reforming of Biogases in Tubular Solid Oxide Fuel Cells. <i>Fuel Cells</i> , 2011, 11, 697-710.	1.5	22
467	Experimental determination of concentration dependence of nitrogen diffusivity in polypropylene. <i>Journal of Applied Polymer Science</i> , 2011, 121, 2828-2834.	1.3	9
468	Modeling of multicomponent mass diffusion in porous spherical pellets: Application to steam methane reforming and methanol synthesis. <i>Chemical Engineering Science</i> , 2011, 66, 1986-2000.	1.9	76
469	Reaction kinetics and producer gas compositions of steam gasification of coal and biomass blend chars, part 2: Mathematical modelling and model validation. <i>Chemical Engineering Science</i> , 2011, 66, 2232-2240.	1.9	45
470	A transport model considering charge adsorption inside pores to describe salts rejection by nanofiltration membranes. <i>Chemical Engineering Science</i> , 2011, 66, 2823-2832.	1.9	65
471	A numerical study of multicomponent mass diffusion and convection in porous pellets for the sorption-enhanced steam methane reforming and desorption processes. <i>Chemical Engineering Science</i> , 2011, 66, 4111-4126.	1.9	58
472	Numerical simulation of multi-component mass transfer in rigid or circulating drops: Multi-component effects even in the presence of weak coupling. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2011, 380, 6-15.	2.3	6
473	Reprint of Numerical simulation of multi-component mass transfer in rigid or circulating drops: Multi-component effects even in the presence of weak coupling. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2011, 382, 251-260.	2.3	2
474	Strategy for predicting effective transport properties of complex porous structures. <i>Computers and Chemical Engineering</i> , 2011, 35, 200-211.	2.0	12
475	Vacuum Insulation Panels (VIPs) for building construction industry – A review of the contemporary developments and future directions. <i>Applied Energy</i> , 2011, 88, 3592-3602.	5.1	198
476	Part I: Prediction of the charged dialysis process performance using a deterministic model. <i>Desalination</i> , 2011, 265, 1-10.	4.0	8
477	Evaluation of SOFC anode polarization simulation using three-dimensional microstructures reconstructed by FIB tomography. <i>Electrochimica Acta</i> , 2011, 56, 4015-4021.	2.6	132

#	ARTICLE	IF	CITATIONS
478	Maxwell's Stefan diffusivities in liquid mixtures: Using molecular dynamics for testing model predictions. <i>Fluid Phase Equilibria</i> , 2011, 301, 110-117.	1.4	39
479	Three-dimensional numerical analysis of mixed ionic and electronic conducting cathode reconstructed by focused ion beam scanning electron microscope. <i>Journal of Power Sources</i> , 2011, 196, 3073-3082.	4.0	122
480	Simulation of methane permeability in carbon slit pores. <i>Journal of Membrane Science</i> , 2011, 369, 319-328.	4.1	16
481	Gauge-invariant approach to thermodiffusion in a liquid binary mixture. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011, 390, 1861-1875.	1.2	7
482	Characterization of membranes for energy and environmental applications. , 2011, , 56-89.		3
483	Modified Solution Approach in Modeling of Separation of Gaseous Hydrocarbons using Nanostructure MFI Zeolite Membranes with M-S Formulation and DSL and IAST Assumptions. <i>Chemical Product and Process Modeling</i> , 2011, 6, .	0.5	1
484	Thermophysical Properties of Undercooled Alloys: An Overview of the Molecular Simulation Approaches. <i>International Journal of Molecular Sciences</i> , 2011, 12, 278-316.	1.8	21
485	Entropy generation analysis for the design optimization of solid oxide fuel cells. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2011, 21, 535-558.	1.6	5
486	Electrochemical Model of Solid Oxide Fuel Cell for Simulation at the Stack Scale I. Calibration Procedure on Experimental Data. <i>Journal of the Electrochemical Society</i> , 2011, 158, B1083.	1.3	29
487	Inorganic membranes for synthesis gas processing. , 2011, , 214-254.		0
488	Lattice Boltzmann Simulation on Solid Oxide Fuel Cell Performance. <i>Advanced Materials Research</i> , 0, 472-475, 260-273.	0.3	0
489	Potential Applications of Zeolite Membranes in Reaction Coupling Separation Processes. <i>Materials</i> , 2012, 5, 2101-2136.	1.3	46
490	Numerical Simulation of SOFC Electrode Polarization Using Three-Dimensional Microstructure Reconstructed by FIB-SEM. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1385, 1.	0.1	1
491	Performance Improvement of a Circular MCFC Through Optimal Design of the Fluid Distribution System. <i>Journal of Fuel Cell Science and Technology</i> , 2012, 9, .	0.8	2
492	Characterization of Transport Properties in Porous Media of a PEM Fuel Cell. , 2012, , .		0
493	9.4 Coarse Grained Methods: Applications to Membranes. , 2012, , 53-75.		0
494	Numerical simulation of organic binder decomposition and combined seepage- and diffusive transport of the gaseous reaction products through a porous green body during thermal debinding of ceramic parts.. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2012, 12, 397-398.	0.2	2
495	Integrated autothermal oxidative coupling and steam reforming of methane. Part 2: Development of a packed bed membrane reactor with a dual function catalyst. <i>Chemical Engineering Science</i> , 2012, 82, 232-245.	1.9	21

#	ARTICLE	IF	CITATIONS
496	Pervaporation dehydration of ethylene glycol by NaA zeolite membranes. <i>Chemical Engineering Research and Design</i> , 2012, 90, 1372-1380.	2.7	36
497	Multicomponent Effective Mediumâ€“Correlated Random Walk Theory for the Diffusion of Fluid Mixtures through Porous Media. <i>Langmuir</i> , 2012, 28, 517-533.	1.6	12
498	Molecular Modeling of Diffusion Coefficient and Ionic Conductivity of CO <sub>2</sub> in Aqueous Ionic Solutions. <i>Journal of Physical Chemistry B</i> , 2012, 116, 2787-2800.	1.2	23
499	On molecular diffusion in nanostructured porous media: interfacial exchange kinetics and surface diffusion. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012, 468, 3100-3120.	1.0	13
500	Ion Exchange Equilibria and Kinetics. , 2012, , 51-120.		13
501	On the Consistent Modeling of Porous Catalyst Pellets: Mass and Molar Formulations. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 8222-8236.	1.8	23
502	VOC sorption in glassy polyimidesâ€”Measurements and modeling. <i>Journal of Membrane Science</i> , 2012, 415-416, 596-607.	4.1	13
503	Water diffusion in poly(vinyl alcohol) membranes: A rigorous analysis of the pervaporation process. <i>Journal of Membrane Science</i> , 2012, 417-418, 154-162.	4.1	9
504	Laminated mordenite/ZSM-5 hybrid membranes by one-step synthesis: Preparation, membrane microstructure and pervaporation performance. <i>Microporous and Mesoporous Materials</i> , 2012, 160, 85-96.	2.2	17
505	One-dimensional Model of Oxygen Transport Impedance Accounting for Convection Perpendicular to the Electrode. <i>Fuel Cells</i> , 2012, 12, 848-861.	1.5	28
506	Thermodynamics of small systems embedded in a reservoir: a detailed analysis of finite size effects. <i>Molecular Physics</i> , 2012, 110, 1069-1079.	0.8	62
507	Dynamic modelling, validation and analysis of post-combustion chemical absorption CO <sub>2</sub> capture plant. <i>International Journal of Greenhouse Gas Control</i> , 2012, 9, 428-445.	2.3	102
508	Modelling and systematic experimental investigation of mass transfer in supported palladium-based membrane separators. <i>International Journal of Greenhouse Gas Control</i> , 2012, 11, S122-S129.	2.3	22
509	Theoretical considerations on the modelling of transport in a three-phase electrode and application to a proton conducting solid oxide electrolysis cell. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 11579-11594.	3.8	15
510	Computational fluid dynamics applied to high temperature hydrogen separation membranes. <i>Frontiers of Chemical Science and Engineering</i> , 2012, 6, 3-12.	2.3	24
511	MODELING AND SIMULATION OF A PERVAPORATION PROCESS FOR FATTY ESTER SYNTHESIS. <i>Chemical Engineering Communications</i> , 2012, 199, 1357-1374.	1.5	11
512	Fick Diffusion Coefficients in Ternary Liquid Systems from Equilibrium Molecular Dynamics Simulations. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 10247-10258.	1.8	79
513	Pervaporation. , 2012, , 267-291.		2

#	ARTICLE	IF	CITATIONS
514	On Mass Transport Through a Membrane Layer. , 2012, , 1-34.		7
515	Diffusion Through a Plane Membrane Layer. , 2012, , 45-80.		0
516	Transport diffusivities of fluids in nanopores by non-equilibrium molecular dynamics simulation. Molecular Simulation, 2012, 38, 540-553.	0.9	61
517	Gas Permeation through Polydimethylsiloxane Membranes: Comparison of Three Model Combinations. Chemical Engineering and Technology, 2012, 35, 1833-1841.	0.9	12
518	Effect of pH, CO <sub>2</sub> , and High Glucose Concentrations on Polydimethylsiloxane Pervaporation Membranes for Ethanol Removal. Industrial & Engineering Chemistry Research, 2012, 51, 9328-9334.	1.8	23
519	A Survey of Multicomponent Mass Diffusion Flux Closures for Porous Pellets: Mass and Molar Forms. Transport in Porous Media, 2012, 93, 99-126.	1.2	25
520	Contribution of the Dusty Gas Model to Permeability/Diffusion Tests on Partially Saturated Clay Rocks. Transport in Porous Media, 2012, 93, 609-634.	1.2	10
521	How to use a multi-ionic transport model to fully predict rejection of mineral salts by nanofiltration membranes. Chemical Engineering Journal, 2012, 189-190, 24-31.	6.6	52
522	Multicomponent gas diffusion in hardened cement paste at temperatures up to 350°C. Cement and Concrete Research, 2012, 42, 656-664.	4.6	9
523	On the diffusion in porous electrodes of SOFCs. Chemical Engineering Science, 2012, 69, 571-577.	1.9	15
524	Reactor performance optimization by the use of a novel combined pellet reflecting both catalyst and adsorbent properties. Fuel Processing Technology, 2012, 99, 13-34.	3.7	19
525	Multi-component gas transport in micro-porous domains: Multidimensional simulation at the macroscale. International Journal of Heat and Mass Transfer, 2012, 55, 480-487.	2.5	9
526	Comparison of diffusion models in the modeling of a catalytic membrane fixed bed reactor coupling dehydrogenation of ethylbenzene with hydrogenation of nitrobenzene. Computers and Chemical Engineering, 2012, 38, 11-23.	2.0	9
527	An open-source library for the numerical modeling of mass-transfer in solid oxide fuel cells. Computer Physics Communications, 2012, 183, 125-146.	3.0	37
528	A modified dusty gas model in the form of a Fick's model for the prediction of multicomponent mass transport in a solid oxide fuel cell anode. Journal of Power Sources, 2012, 206, 171-178.	4.0	70
529	Development of practically available up-scaled high-silica CHA-type zeolite membranes for industrial purpose in dehydration of N-methyl pyrrolidone solution. Journal of Membrane Science, 2012, 409-410, 82-95.	4.1	63
530	Application of the mass-based UNIQUAC model to membrane systems: A critical revision. Journal of Chemical Thermodynamics, 2012, 48, 260-266.	1.0	8
531	Prediction of the diffusion coefficients in multicomponent liquid refrigerant solutions. Journal of Food Engineering, 2012, 109, 490-495.	2.7	4

#	ARTICLE	IF	CITATIONS
532	Extractive distillation modeling of the ternary system 2-methoxy-2-methylpropane-methanol-butan-1-ol. <i>Chemical Papers</i> , 2012, 66, .	1.0	2
533	Multicomponent mass diffusion in porous pellets: Effects of flux models on the pellet level and impacts on the reactor level. Application to methanol synthesis. <i>Canadian Journal of Chemical Engineering</i> , 2013, 91, 66-76.	0.9	12
534	Calculating thermodynamic factors of ternary and multicomponent mixtures using the Permuted Widom test particle insertion method. <i>Theoretical Chemistry Accounts</i> , 2013, 132, 1.	0.5	7
535	Multiscale modelling of heterogeneously catalysed transesterification reaction process: an overview. <i>RSC Advances</i> , 2013, 3, 6226.	1.7	15
536	Diffusion Coefficients from Molecular Dynamics Simulations in Binary and Ternary Mixtures. <i>International Journal of Thermophysics</i> , 2013, 34, 1169-1196.	1.0	102
537	The Maxwell–Stefan description of binary diffusion. <i>European Journal of Physics</i> , 2013, 34, 1103-1126.	0.3	3
538	Multicomponent diffusion in molten LiCl-KCl: Dynamical correlations and divergent Maxwell-Stefan diffusivities. <i>Physical Review E</i> , 2013, 87, 052312.	0.8	19
539	Intensification of isoamyl acetate production: transport properties of silica membranes. <i>Desalination and Water Treatment</i> , 2013, 51, 2377-2386.	1.0	8
540	Simulation of pellet model with multicomponent mass diffusion closure using least squares spectral element solution method. <i>Canadian Journal of Chemical Engineering</i> , 2013, 91, 1547-1567.	0.9	2
541	Modelling of organic-solvent flux through a polyimide membrane. <i>Journal of Membrane Science</i> , 2013, 428, 554-561.	4.1	33
543	Evaluation of weighted residual methods for the solution of the pellet equations: The orthogonal collocation, Galerkin, tau and least-squares methods. <i>Computers and Chemical Engineering</i> , 2013, 58, 223-259.	2.0	30
544	CHAPTER 8. Three-dimensional Numerical Modelling of Ni-YSZ Anode. <i>RSC Energy and Environment Series</i> , 0, , 200-218.	0.2	0
545	Local Composition Based Maxwell–Stefan Diffusivity Model for Binary Liquid Systems. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 10845-10852.	1.8	27
546	Simulation of binary gas separation through multi-tube molecular sieving membranes at high temperatures. <i>Chemical Engineering Journal</i> , 2013, 218, 394-404.	6.6	31
547	Gas transport in porous electrodes of solid oxide fuel cells: A review on diffusion and diffusivity measurement. <i>Journal of Power Sources</i> , 2013, 237, 64-73.	4.0	73
548	The Performance Improvement of a Thick Electrode Solid Oxide Fuel Cell. <i>Energy Procedia</i> , 2013, 34, 243-261.	1.8	4
549	How to apply the Kirkwood–Buff theory to individual species in salt solutions. <i>Chemical Physics Letters</i> , 2013, 582, 154-157.	1.2	49
550	A numerical study of pellet model consistency with respect to molar and mass average velocities, pressure gradients and porosity models for methanol synthesis process: Effects of flux models on reactor performance. <i>Chemical Engineering Research and Design</i> , 2013, 91, 296-317.	2.7	9

#	ARTICLE	IF	CITATIONS
551	A generalized mathematical model to study gas transport in PEMFC porous media. International Journal of Heat and Mass Transfer, 2013, 58, 70-79.	2.5	48
552	Benchmarking of Hydrogen Selective Membranes: Experimental and Modelling Approach to Compare Membrane Performance. Energy Procedia, 2013, 37, 1020-1029.	1.8	6
553	Application of different diffusion approaches in oxy-fuel combustion of single coal char particles. Fuel, 2013, 113, 844-853.	3.4	7
554	Molecular Dynamics Study of Carbon Dioxide Sorption and Plasticization at the Interface of a Glassy Polymer Membrane. Macromolecules, 2013, 46, 2433-2449.	2.2	42
555	Mutual diffusion in the ternary mixture of water + methanol + ethanol and its binary subsystems. Physical Chemistry Chemical Physics, 2013, 15, 3985.	1.3	76
556	Simple ideas about thermodiffusion in a binary liquid mixture. Comptes Rendus - Mecanique, 2013, 341, 365-371.	2.1	2
557	Predictive Models for Mixed-Matrix Membrane Performance: A Review. Chemical Reviews, 2013, 113, 4980-5028.	23.0	455
558	Modeling diffusion and gas-oil mass transfer in fractured reservoirs. Journal of Petroleum Science and Engineering, 2013, 105, 1-17.	2.1	82
559	Microporous silica membranes: fundamentals and applications in membrane reactors for hydrogen separation. , 2013, , 337-369.		3
560	Porous ceramic membranes for membrane reactors. , 2013, , 298-336.		17
561	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
562	A numerical study of pellets having both catalytic- and capture properties for SE-SMR process: Kinetic- and product layer diffusion controlled regimes. Fuel Processing Technology, 2013, 106, 231-246.	3.7	37
563	Metal organic framework based mixed matrix membranes: An increasingly important field of research with a large application potential. Microporous and Mesoporous Materials, 2013, 166, 67-78.	2.2	434
564	Fully coupled generalized hybrid-mixed finite element approximation of two-phase two-component flow in porous media. Part I: formulation and properties of the mathematical model. Computational Geosciences, 2013, 17, 431-442.	1.2	14
565	Modeling of CO <sub>2</sub> Absorption Kinetics in Aqueous 2-Methylpiperazine. Industrial & Engineering Chemistry Research, 2013, 52, 4239-4248.	1.8	23
566	Guest diffusion in dipeptide crystals. CrystEngComm, 2013, 15, 1532-1535.	1.3	7
568	Numerical simulation of intermediate-temperature disk type seal-less SOFC fed with partially reformed methane. IEEJ Transactions on Electrical and Electronic Engineering, 2013, 8, 567-573.	0.8	3
569	A direct method for calculating thermodynamic factors for liquid mixtures using the Permuted Widom test particle insertion method. Molecular Physics, 2013, 111, 287-296.	0.8	18



#	ARTICLE	IF	CITATIONS
571	Mixed finite element methods for addressing multi-species diffusion using the Maxwell–Stefan equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 279, 515-535.	3.4	11
572	Computational Modeling of Foreign Cation Contamination in PEFCs. <i>Journal of the Electrochemical Society</i> , 2014, 161, F1081-F1088.	1.3	17
573	Bubble Removal in Microfluidic Devices Using Nanofibrous Membranes. , 2014, , .		1
574	Reactive Distillation. , 2014, , 261-294.		16
575	Chemical Reactor Modeling. , 2014, , .		68
576	Partial molar enthalpies and reaction enthalpies from equilibrium molecular dynamics simulation. <i>Journal of Chemical Physics</i> , 2014, 141, 144501.	1.2	20
577	Accurate Modeling of Evaporation and Enthalpy of Vapor Phase in CO <sub>2</sub> Absorption by Amine Based Solution. <i>Separation Science and Technology</i> , 2014, 49, 1326-1334.	1.3	8
578	Elementary Kinetic Theory of Gases. , 2014, , 183-365.		1
580	A Solid Oxide Fuel Cell Micro-Scale Modeling with Cylindrical Particle Shaped Electrodes. <i>Advanced Materials Research</i> , 0, 931-932, 1025-1032.	0.3	0
581	Fluorescence recovery after photobleaching investigation of protein transport and exchange in chromatographic media. <i>Journal of Chromatography A</i> , 2014, 1340, 33-49.	1.8	2
582	Adsorption and transport of gases in a supported microporous silica membrane. <i>Journal of Membrane Science</i> , 2014, 460, 46-61.	4.1	21
583	Model-based equipment-design for plant-based extraction processes—considering botanic and thermodynamic aspects. <i>Comptes Rendus Chimie</i> , 2014, 17, 187-196.	0.2	15
584	A review of computational fluid dynamics applications in pressure-driven membrane filtration. <i>Reviews in Environmental Science and Biotechnology</i> , 2014, 13, 183-201.	3.9	46
585	The influence of kinetics, mass transfer and catalyst deactivation on the growth rate of multiwalled carbon nanotubes from ethene on a cobalt-based catalyst. <i>Chemical Engineering Journal</i> , 2014, 244, 68-74.	6.6	20
586	Numerical Simulation of the Characteristics of Heavy Particles in Bar-Plate DC Positive Corona Discharge Based on a Hybrid Model. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 868-878.	0.6	24
587	One-Dimensional Macroscopic Model of Solid Oxide Fuel Cell Anode with Analytical Modeling of H <sub>2</sub> /CO Electrochemical Co-oxidation. <i>Electrochimica Acta</i> , 2014, 134, 426-434.	2.6	16
588	Comprehensive modeling of tubular solid oxide electrolysis cell for co-electrolysis of steam and carbon dioxide. <i>Energy</i> , 2014, 70, 420-434.	4.5	96
589	Stochastic reconstruction of mixed-matrix membranes and evaluation of effective permeability. <i>Computational Materials Science</i> , 2014, 89, 142-156.	1.4	18



#	ARTICLE	IF	CITATIONS
590	Model-based hazard identification in multiphase chemical reactors. <i>Journal of Loss Prevention in the Process Industries</i> , 2014, 29, 155-162.	1.7	25
591	Porous Inorganic Membranes for CO <sub>2</sub> Capture: Present and Prospects. <i>Chemical Reviews</i> , 2014, 114, 1413-1492.	23.0	481
592	Experimental study and modelling of methane adsorption and diffusion in shale. <i>Fuel</i> , 2014, 117, 509-519.	3.4	362
593	Modeling and optimum design of hybrid solid oxide fuel cell-gas turbine power plants. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 21196-21214.	3.8	57
594	Electrochemical Simulation of Planar Solid Oxide Fuel Cells with Detailed Microstructural Modeling. <i>Electrochimica Acta</i> , 2014, 146, 151-163.	2.6	41
595	Rotational and Translational Motion of Benzene in ZIF-8 Studied by <sup>2</sup> H NMR: Estimation of Microscopic Self-Diffusivity and Its Comparison with Macroscopic Measurements. <i>Journal of Physical Chemistry C</i> , 2014, 118, 12873-12879.	1.5	39
596	Transport diffusivity of propane and propylene inside SWNTs from equilibrium molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 24697-24703.	1.3	8
597	Mass Transfer in Distillation. , 2014, , 97-143.		1
598	Modeling of Distillation Processes. , 2014, , 383-436.		9
599	Integrated Stefan-Maxwell, Mean Field, and Single-Event Microkinetic Methodology for Simultaneous Diffusion and Reaction inside Microporous Materials. <i>Journal of Physical Chemistry C</i> , 2014, 118, 22053-22068.	1.5	14
600	Modeling the controlled release of essential oils from a polymer matrix—A special case. <i>Industrial Crops and Products</i> , 2014, 61, 23-30.	2.5	20
601	On the measurement of transport parameters of porous solids in permeation and Wicke-Kallenbach cells. <i>Chemical Engineering Science</i> , 2014, 118, 192-207.	1.9	13
602	Unraveling Diffusion and Other Shape Selectivity Effects in ZSM5 Using <i>n</i> -Hexane Hydroconversion Single-Event Microkinetics. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 15333-15347.	1.8	28
603	Temperature-Dependent Diffusion Coefficients from 1D Raman Spectroscopy. <i>Journal of Solution Chemistry</i> , 2014, 43, 144-157.	0.6	16
604	The fluid dynamic effect on the driving force for a cobalt oxide silica membrane module at high temperatures. <i>Chemical Engineering Science</i> , 2014, 111, 142-152.	1.9	22
605	Prediction of Maxwell-Stefan diffusion coefficients in polymer-multicomponent fluid systems. <i>Journal of Membrane Science</i> , 2014, 470, 389-398.	4.1	22
606	Nanofluidic transport governed by the liquid/vapour interface. <i>Nature Nanotechnology</i> , 2014, 9, 317-323.	15.6	159
607	Simplified Determination Method of Intraparticle Diffusivity Within a Resin Adsorbent from Binary-Component Liquid Adsorption Uptake Curves. <i>Transport in Porous Media</i> , 2014, 102, 349-364.	1.2	2

#	ARTICLE	IF	CITATIONS
608	Modelling ion exchange kinetics in zeolyte-type materials using Maxwell-Stefan approach. Desalination and Water Treatment, 2014, 52, 5333-5342.	1.0	8
609	Lattice-Boltzmann method for the simulation of multiphase mass transfer and reaction of dilute species. Physical Review E, 2014, 89, 053308.	0.8	33
610	One-dimensional modeling and analysis for performance degradation of high temperature proton exchange membrane fuel cell using PA doped PBI membrane. Solid State Ionics, 2014, 262, 319-323.	1.3	29
611	Kinetic rate of $\text{CO}_2$ uptake of a synthetic Ca-based sorbent: Experimental data and numerical simulations. Fuel, 2014, 120, 53-65.	3.4	10
612	Understanding the diffusional tortuosity of porous materials: An effective medium theory perspective. Chemical Engineering Science, 2014, 110, 55-71.	1.9	36
613	A numerical study of the effectiveness factors of nickel catalyst pellets used in steam methane reforming for residential fuel cell applications. International Journal of Hydrogen Energy, 2014, 39, 9180-9192.	3.8	43
614	Prototyping of catalyst pore-systems by a combined synthetic, analytical and computational approach: Application to mesoporous TiO <sub>2</sub> . Chemical Engineering Journal, 2014, 248, 49-62.	6.6	12
615	A mathematical model of the effect of pH and food matrix composition on fluid transport into foods: An application in gastric digestion and cheese brining. Food Research International, 2014, 57, 34-43.	2.9	17
616	Optimal synthesis and design of solvent-based PCC process using a rate-based model. Separation and Purification Technology, 2014, 132, 149-167.	3.9	8
617	A modelling evaluation of an ammonia-fuelled microchannel reformer for hydrogen generation. International Journal of Hydrogen Energy, 2014, 39, 11390-11402.	3.8	38
618	Challenges in the electrochemical modelling of solid oxide fuel and electrolyser cells. Renewable and Sustainable Energy Reviews, 2014, 33, 701-718.	8.2	50
620	A new state-observer of the inner PEM fuel cell pressures for enhanced system monitoring. EPJ Applied Physics, 2014, 66, 30901.	0.3	1
621	A comparative study on the free volume theories for diffusivity through polymeric membrane in pervaporation process. Journal of Applied Polymer Science, 2014, 131, .	1.3	13
622	A Thin Film Electrode Solid Oxide Fuel Cell Model. Energy Procedia, 2014, 56, 35-47.	1.8	1
623	Theoretical Modeling for Fundamental Understanding of High-Temperature Solid Oxide Fuel Cells. Electrochemical Energy Storage and Conversion, 2015, , 339-361.	0.0	0
624	Microporous Crystalline Membranes and Their Application for CO <sub>2</sub> Separations. World Scientific Series in Nanoscience and Nanotechnology, 2015, , 401-434.	0.1	1
625	Mass transfer. , 0, , 216-316.		0
626	Multicomponent diffusion in molten salt LiF-BeF <sub>2</sub> : Dynamical correlations and Maxwell-Stefan diffusivities. AIP Conference Proceedings, 2015, , .	0.3	0

#	ARTICLE	IF	CITATIONS
627	MTO Processes Development. <i>Advances in Chemical Engineering</i> , 2015, , 279-335.	0.5	42
628	A Model for Surface Diffusion of Adsorbed Gas in Nanopores of Shale Gas Reservoirs. , 2015, , .		11
629	Electroviscous Effects in Ceramic Nanofiltration Membranes. <i>ChemPhysChem</i> , 2015, 16, 3397-3407.	1.0	7
631	A numerical study of fixed bed reactor modelling for steam methane reforming process. <i>Canadian Journal of Chemical Engineering</i> , 2015, 93, 1222-1238.	0.9	20
632	Mass Transfer Mechanisms and Transport Resistances in Membrane Separation Process. , 0, , .		9
633	Zeolite Membranes in Catalysisâ€”From Separate Units to Particle Coatings. <i>Catalysts</i> , 2015, 5, 2161-2222.	1.6	30
634	Molecular Simulation of Shale Gas Adsorption and Diffusion in Clay Nanopores. <i>Computation</i> , 2015, 3, 687-700.	1.0	40
635	Application of coupled solution-diffusion model in organic solvent nanofiltration: Positive and negative rejection of solutes. <i>Separation Science and Technology</i> , 0, , 150527095459001.	1.3	0
636	Mass transfer simulation of nanofiltration membranes for electrolyte solutions through generalized Maxwell-Stefan approach. <i>Korean Journal of Chemical Engineering</i> , 2015, 32, 1388-1404.	1.2	5
637	A reverse nonequilibrium molecular dynamics method for calculating the mutual diffusion coefficient for binary fluids. <i>Chemical Engineering Science</i> , 2015, 130, 1-7.	1.9	10
638	Cross diffusion effects in the interfacial mass and heat transfer of multicomponent droplets. <i>International Journal of Heat and Mass Transfer</i> , 2015, 85, 830-840.	2.5	12
639	Numerical modeling of the degradation rate for membrane electrode assemblies in high temperature proton exchange membrane fuel cells and analyzing operational effects of the degradation. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 5444-5455.	3.8	12
640	A generic transport model for separation of gas mixtures by glassy polymer membranes based on Maxwellâ€”Stefan formulation. <i>RSC Advances</i> , 2015, 5, 48207-48216.	1.7	14
641	Theoretical analysis of hydrogen production by variable volume membrane batch reactors with direct liquid fuel injection. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 8005-8019.	3.8	1
642	Pore-scale modeling and analysis of surface diffusion effects on shale-gas flow in Kerogen pores. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 27, 979-985.	2.1	41
643	Serpentine diffusion trajectories and the Ouzo effect in partially miscible ternary liquid mixtures. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 27428-27436.	1.3	23
644	Kinetic Modeling of Pure and Multicomponent Gas Permeation Through Microporous Membranes: Diffusion Mechanisms and Influence of Isotherm Type. <i>Separation and Purification Reviews</i> , 2015, 44, 283-307.	2.8	22
645	Numerical investigation on impacts on fuel velocity distribution nonuniformity among solid oxide fuel cell unit channels. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 3035-3047.	3.8	39

#	ARTICLE	IF	CITATIONS
646	Simulations of traveling hybrid waves. <i>Combustion and Flame</i> , 2015, 162, 736-744.	2.8	3
647	Inorganic microporous membranes for H <sub>2</sub> and CO <sub>2</sub> separation—Review of experimental and modeling progress. <i>Chemical Engineering Science</i> , 2015, 127, 401-417.	1.9	92
648	Common inconsistencies in modeling gas transport in porous electrodes: The dusty-gas model and the Fick law. <i>Journal of Power Sources</i> , 2015, 279, 133-137.	4.0	43
649	Metal-organic framework based mixed matrix membranes: a solution for highly efficient CO <sub>2</sub> capture?. <i>Chemical Society Reviews</i> , 2015, 44, 2421-2454.	18.7	732
650	Model for Surface Diffusion of Adsorbed Gas in Nanopores of Shale Gas Reservoirs. <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 3225-3236.	1.8	282
651	Uphill diffusion in multicomponent mixtures. <i>Chemical Society Reviews</i> , 2015, 44, 2812-2836.	18.7	106
653	Multicomponent gas diffusion in nonuniform tubes. <i>AIChE Journal</i> , 2015, 61, 1404-1412.	1.8	6
654	Evaporation maps for non-ideal ternary mixtures. <i>Chemical Engineering Science</i> , 2015, 126, 641-659.	1.9	1
655	Zeolite membranes — a review and comparison with MOFs. <i>Chemical Society Reviews</i> , 2015, 44, 7128-7154.	18.7	594
656	On the solution of the advection equation and advective dominated reactor models by weighted residual methods. <i>Computers and Fluids</i> , 2015, 120, 24-36.	1.3	0
657	Mathematical modeling of synthesis gas fueled electrochemistry and transport including H <sub>2</sub> /CO co-oxidation and surface diffusion in solid oxide fuel cell. <i>Journal of Power Sources</i> , 2015, 294, 317-332.	4.0	25
658	Optimizing spatial pore-size and porosity distributions of adsorbents for enhanced adsorption and desorption performance. <i>Chemical Engineering Science</i> , 2015, 132, 108-117.	1.9	29
659	Modelling and optimization of hybrid PSA/membrane separation processes. <i>Adsorption</i> , 2015, 21, 283-305.	1.4	24
660	Continuum thermodynamics of chemically reacting fluid mixtures. <i>Acta Mechanica</i> , 2015, 226, 1757-1805.	1.1	86
661	Influence of the injected water on gas outburst disasters in coal mine. <i>Natural Hazards</i> , 2015, 76, 1093-1109.	1.6	41
662	Maxwell-Stefan modeling of mass transfer in solvent impregnated resins. <i>Chemical Engineering Science</i> , 2015, 132, 139-149.	1.9	1
663	Multicomponent Gas Diffusion in Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2015, 162, F613-F621.	1.3	38
664	Investigations on permeation of water vapor through synthesized nanoporous zeolite membranes; a mass transfer model. <i>RSC Advances</i> , 2015, 5, 30719-30726.	1.7	8

#	ARTICLE	IF	CITATIONS
665	An analytical approach for solid oxide cell electrode geometric design. <i>Journal of Power Sources</i> , 2015, 300, 365-375.	4.0	5
666	Gas Permeation through Nafion. Part 1: Measurements. <i>Journal of Physical Chemistry C</i> , 2015, 119, 25145-25155.	1.5	144
667	Multi-Physics Modeling of Solid Oxide Fuel Cell Fueled by Methane and Analysis of Carbon Deposition. <i>Chinese Journal of Chemical Physics</i> , 2015, 28, 299-307.	0.6	12
668	Dynamic electro-thermal modeling of co-electrolysis of steam and carbon dioxide in a tubular solid oxide electrolysis cell. <i>Energy</i> , 2015, 89, 637-647.	4.5	42
669	Sign Crossover in All Maxwell-Stefan Diffusivities for Molten Salt $\text{LiF-BeF}_2$ : A Molecular Dynamics Study. <i>Journal of Physical Chemistry B</i> , 2015, 119, 10652-10663.	1.2	8
670	Lattice Boltzmann simulation of multicomponent noncontinuum diffusion in fractal porous structures. <i>Physical Review E</i> , 2015, 92, 013025.	0.8	13
671	Selective recovery of a pyridine derivative from an aqueous waste stream containing acetic acid and succinonitrile with solvent impregnated resins. <i>Reactive and Functional Polymers</i> , 2015, 86, 67-79.	2.0	10
672	Pervaporation. , 2015, , 101-154.		18
673	Simplification of detailed rate-based model of post-combustion CO <sub>2</sub> capture for full chain CCS integration studies. <i>Fuel</i> , 2015, 142, 87-93.	3.4	9
674	Maxwell-Stefan based modelling of ion exchange systems containing common species ( $\text{Cd}^{2+}$ , $\text{Na}^+$ ) and distinct sorbents (ETS-4, ETS-10). <i>International Journal of Environmental Science and Technology</i> , 2015, 12, 183-192.	1.8	8
675	A complete transport validated model on a zeolite membrane for carbon dioxide permeance and capture. <i>Applied Thermal Engineering</i> , 2015, 74, 36-46.	3.0	14
676	Gas transport evaluation in lithium-air batteries with micro/nano-structured cathodes. <i>Journal of Power Sources</i> , 2015, 274, 762-767.	4.0	15
677	Interfacial oxygen transport resistance in a proton exchange membrane fuel cell air channel with an array of water droplets. <i>International Journal of Heat and Mass Transfer</i> , 2015, 80, 180-191.	2.5	9
678	The Maxwell-Stefan Diffusion Limit for a Kinetic Model of Mixtures. <i>Acta Applicandae Mathematicae</i> , 2015, 136, 79-90.	0.5	26
680	Mass Transport through Nanostructured Membranes: Towards a Predictive Tool. <i>Membranes</i> , 2016, 6, 49.	1.4	6
681	Delineation of Gravitational Instability Induced by Gas Charges into Oil Reservoirs Using Diffusion and Flory-Huggins-Zuo Equations. , 2016, , .		8
682	Understanding Reservoir Fluid Dynamic Processes by Using Diffusive Models. , 2016, , .		10
683	Applicability of the linearized theory of the Maxwell-Stefan equations. <i>AIChE Journal</i> , 2016, 62, 2929-2946.	1.8	4

#	ARTICLE	IF	CITATIONS
684	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. <i>Journal of Membrane Science</i> , 2016, 520, 434-449.	4.1	30
685	Efficient methanol synthesis: Perspectives, technologies and optimization strategies. <i>Progress in Energy and Combustion Science</i> , 2016, 56, 71-105.	15.8	316
686	Particle-scale Investigation of Heat Transfer in Radiation-driven Char Gasification. <i>Chemical Engineering and Technology</i> , 2016, 39, 1903-1911.	0.9	4
687	Maxwell-Stefan diffusion and dynamical correlation in molten LiF-KF: A molecular dynamics study. <i>AIP Conference Proceedings</i> , 2016, , .	0.3	0
688	Structure-preserving collocation method for parabolic systems Application to a diffusion Process.. <i>IFAC-PapersOnLine</i> , 2016, 49, 82-86.	0.5	1
689	Effects of functionality on the transport properties of thiol-ene/acrylate systems: A molecular dynamics study. <i>Journal of Molecular Liquids</i> , 2016, 224, 859-871.	2.3	16
690	Numerical study of the dissolution of carbon dioxide in an ionic liquid. <i>Chemical Engineering Science</i> , 2016, 147, 173-179.	1.9	7
691	Probing pore blocking effects on multiphase reactions within porous catalyst particles using a discrete model. <i>AIChE Journal</i> , 2016, 62, 451-460.	1.8	22
692	Investigating the Validity of the Knudsen Diffusivity Prescription for Mesoporous and Macroporous Materials. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 4749-4759.	1.8	22
693	Modeling mass transfer in solid oxide fuel cell anode: II. H <sub>2</sub> /CO co-oxidation and surface diffusion in synthesis-gas operation. <i>Journal of Power Sources</i> , 2016, 324, 261-271.	4.0	13
694	A three-dimensional simulation of a mid-and-low temperature solar receiver/reactor for hydrogen production. <i>Solar Energy</i> , 2016, 134, 273-283.	2.9	32
695	Effects of gas diffusion from fractures to coal matrix on the evolution of coal strains: Experimental observations. <i>International Journal of Coal Geology</i> , 2016, 162, 74-84.	1.9	50
696	Experimental measurement and modeling of ion exchange equilibrium and kinetics of cadmium(II) solutions over microporous stannosilicate AV-6. <i>Chemical Engineering Journal</i> , 2016, 295, 139-151.	6.6	8
697	Effect of structural anisotropy and pore-network accessibility on fluid transport in nanoporous Ti <sub>3</sub> SiC <sub>2</sub> carbide-derived carbon. <i>Carbon</i> , 2016, 103, 16-27.	5.4	23
698	Isolating the impact of CO concentration in syngas mixtures on SOFC performance via internal reforming and direct oxidation. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 9035-9047.	3.8	28
699	Recent development on the effect of water/moisture on the performance of zeolite membrane and MMMs containing zeolite for gas separation; review. <i>RSC Advances</i> , 2016, 6, 42943-42961.	1.7	35
700	A Linear Diffusion Model of Adsorption Kinetics at Fluid/Fluid Interfaces. <i>Journal of Surfactants and Detergents</i> , 2016, 19, 297-314.	1.0	14
701	Understanding the thermally induced phase separation process via a Maxwell-Stefan model. <i>Journal of Membrane Science</i> , 2016, 507, 143-153.	4.1	11

#	ARTICLE	IF	CITATIONS
702	Validation of a physically-based solid oxide fuel cell anode model combining 3D tomography and impedance spectroscopy. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 22381-22393.	3.8	50
703	A hydrothermal dynamic zone model for building energy simulation. <i>Energy and Buildings</i> , 2016, 133, 389-402.	3.1	1
704	Gas Transportation and Enhanced Coalbed Methane Recovery Processes in Deep Coal Seams: A Review. <i>Energy &amp; Fuels</i> , 2016, 30, 8832-8849.	2.5	114
705	A novel modelling approach to surface and Knudsen multicomponent diffusion through NaY zeolite membranes. <i>Microporous and Mesoporous Materials</i> , 2016, 235, 87-99.	2.2	34
706	Trapping of Li <sup>+</sup> ions by [ThFn]4 <sup>+</sup> clusters leading to oscillating Maxwell-Stefan diffusivity in the molten salt LiF-ThF <sub>4</sub> . <i>Journal of Physical Chemistry B</i> , 2016, 120, 7926-7936.	1.2	4
707	Solution diffusion modeling of a composite PVA/fumed silica ceramic supported membrane. <i>Chemical Engineering and Processing: Process Intensification</i> , 2016, 109, 11-19.	1.8	19
708	Highlighting coupling effects in ionic diffusion. <i>Chemical Engineering Research and Design</i> , 2016, 114, 1-12.	2.7	7
709	Extending reverse nonequilibrium molecular dynamics to the calculation of mutual diffusion coefficients in molecular fluid mixtures. <i>Molecular Simulation</i> , 2016, 42, 1379-1384.	0.9	2
710	Describing mixture permeation across polymeric membranes by a combination of Maxwell-Stefan and Flory-Huggins models. <i>Polymer</i> , 2016, 103, 124-131.	1.8	31
711	Effect of crowding and confinement on first-passage times: A model study. <i>Physical Review E</i> , 2016, 93, 062120.	0.8	1
712	Numerical simulations of HI decomposition in coated wall membrane reactor and comparison with packed bed configuration. <i>Applied Mathematical Modelling</i> , 2016, 40, 9001-9016.	2.2	5
713	Mono-dispersed DDR zeolite particles by seeded growth and their CO <sub>2</sub> , N <sub>2</sub> , and H <sub>2</sub> O adsorption properties. <i>Chemical Engineering Journal</i> , 2016, 306, 876-888.	6.6	18
714	Experimental Investigation of Gas Diffusion in Coal – Comparison Between Crushed and Intact Core Samples. , 2016, , .		2
715	Challenges in Predicting Protein-Protein Interactions from Measurements of Molecular Diffusivity. <i>Biophysical Journal</i> , 2016, 111, 1831-1842.	0.2	49
716	The rate of equilibration of viscous aerosol particles. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 5299-5313.	1.9	35
717	Apparent permeability prediction of organic shale with generalized lattice Boltzmann model considering surface diffusion effect. <i>Fuel</i> , 2016, 181, 478-490.	3.4	91
718	Decontamination of VX from Silicone: Characterization of Multicomponent Diffusion Effects. <i>Industrial &amp; Engineering Chemistry Research</i> , 2016, 55, 3139-3149.	1.8	13
719	Experimental Investigation on Permeability and Porosity Hysteresis in Low-Permeability Formations. , 2016, , .		14



#	ARTICLE	IF	CITATIONS
720	A Unified Model for Gas Transfer in Nanopores of Shale-Gas Reservoirs: Coupling Pore Diffusion and Surface Diffusion. SPE Journal, 2016, 21, 1583-1611.	1.7	215
721	Investigation of CO2 Enhanced Gas Recovery in Shale Plays. , 2016, , .		4
722	Mass transfer simulation on pervaporation dehydration of ethanol through hollow fiber NaA zeolite membranes. AIChE Journal, 2016, 62, 2468-2478.	1.8	20
723	Justifying the significance of Knudsen diffusion in solid oxide fuel cells. Energy, 2016, 95, 242-246.	4.5	21
724	Oxygen transport resistance at gas diffusion layer " Air channel interface with film flow of water in a proton exchange membrane fuel cell. Journal of Power Sources, 2016, 302, 331-342.	4.0	11
725	Open-source computational model of a solid oxide fuel cell. Computer Physics Communications, 2016, 200, 15-26.	3.0	53
726	Measurement of dynamic adsorption"diffusion process of methane in shale. Fuel, 2016, 172, 37-48.	3.4	94
727	Modeling mass transfer in solid oxide fuel cell anode: I. Comparison between Fickian, Stefan-Maxwell and dusty-gas models. Journal of Power Sources, 2016, 310, 32-40.	4.0	32
728	A model of dynamic adsorption"diffusion for modeling gas transport and storage in shale. Fuel, 2016, 173, 115-128.	3.4	82
729	Mixed weak-perturbative solution method for Maxwell's equations of diffusion with MÅ¼ller's partial stress tensor in the low velocity limit. Journal of Computational Physics, 2016, 308, 322-346.	1.9	3
730	Investigation of density inversion induced by gas charges into oil reservoirs using diffusion equations. Energy, 2016, 100, 199-216.	4.5	15
731	Diffusion in nanoporous materials: fundamental principles, insights and challenges. New Journal of Chemistry, 2016, 40, 4027-4048.	1.4	153
732	Two-dimensional micro/macroscale model for intermediate-temperature solid oxide fuel cells considering the direct internal reforming of methane. International Journal of Hydrogen Energy, 2016, 41, 5582-5597.	3.8	22
733	A multi-region model for reaction"diffusion process within a porous catalyst pellet. Chemical Engineering Science, 2016, 147, 1-12.	1.9	33
734	Experimental and model analysis of the co-oxidative behavior of syngas feed in an Intermediate Temperature Solid Oxide Fuel Cell. Journal of Power Sources, 2016, 306, 467-480.	4.0	12
735	Models and Applications. , 2016, , 71-152.		0
736	Dynamic binary protein adsorption in ion-exchange media depicted with a parallel diffusion model derived from Maxwell"Stefan theory. Chemical Engineering Science, 2016, 139, 163-172.	1.9	12
737	Engineering Applications. , 2016, , 153-290.		0



#	ARTICLE	IF	CITATIONS
738	Molecular simulation of CO <sub>2</sub> /CH <sub>4</sub> self- and transport diffusion coefficients in coal. <i>Fuel</i> , 2016, 165, 19-27.	3.4	113
739	A novel monoamine modification strategy toward high-performance organic solvent nanofiltration (OSN) membrane for sustainable molecular separations. <i>Journal of Membrane Science</i> , 2016, 497, 77-89.	4.1	78
740	Multicomponent and Multiscale Systems. , 2016, , .		21
741	Predicting diffusion coefficients of chemicals in and through packaging materials. <i>Critical Reviews in Food Science and Nutrition</i> , 2017, 57, 275-312.	5.4	58
742	Modeling and Experimental Studies on CO <sub>2</sub> Gasification of Coarse Coal Char Particle. <i>Energy &amp; Fuels</i> , 2017, 31, 2652-2662.	2.5	17
743	Comprehensive Analysis of Sorption Enhanced Steam Methane Reforming in a Variable Volume Membrane Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 1758-1771.	1.8	7
744	A flexible and robust model for low temperature catalytic desorption of CO <sub>2</sub> from CO <sub>2</sub> -loaded amines over solid acid catalysts. <i>Chemical Engineering Science</i> , 2017, 170, 518-529.	1.9	24
745	Numerical simulation of cell-to-cell performance variation within a syngas-fuelled planar solid oxide fuel cell stack. <i>Applied Thermal Engineering</i> , 2017, 114, 653-662.	3.0	37
746	Applications of molecular simulations for separation and adsorption in zeolites. <i>Microporous and Mesoporous Materials</i> , 2017, 242, 294-348.	2.2	70
747	Simulation of heat and mass transfer with cross-flow hollow fiber vacuum membrane distillation: The influence of fiber arrangement. <i>Chemical Engineering Research and Design</i> , 2017, 119, 12-22.	2.7	20
748	Analysis of Asphaltene Instability Using Diffusive and Thermodynamic Models during Gas Charges into Oil Reservoirs. <i>Energy &amp; Fuels</i> , 2017, 31, 3717-3728.	2.5	14
749	The Maxwell–Stefan diffusion limit for a kinetic model of mixtures with general cross sections. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 2017, 159, 40-61.	0.6	20
750	Apparent and True Diffusion Coefficients of Methane in Coal and Their Relationships with Methane Desorption Capacity. <i>Energy &amp; Fuels</i> , 2017, 31, 2643-2651.	2.5	66
751	Detailed finite element method modeling of evaporating multi-component droplets. <i>Journal of Computational Physics</i> , 2017, 340, 670-687.	1.9	58
752	Anode characterisation and gas diffusion behaviour in aluminium smelting. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	3
753	Understanding the impact of membrane properties and transport phenomena on the energetic performance of membrane distillation desalination. <i>Journal of Membrane Science</i> , 2017, 539, 458-474.	4.1	100
754	Maxwell–Stefan diffusion asymptotics for gas mixtures in non-isothermal setting. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 2017, 159, 285-297.	0.6	12
755	Emergence of traveling wave endothermic reaction in a catalytic fixed bed under microwave heating. <i>Energy</i> , 2017, 119, 989-995.	4.5	6

#	ARTICLE	IF	CITATIONS
756	Investigation of Methane Desorption and Its Effect on the Gas Production Process from Shale: Experimental and Mathematical Study. <i>Energy &amp; Fuels</i> , 2017, 31, 205-216.	2.5	44
757	Maxwell–Stefan diffusion coefficient estimation for ternary systems: an ideal ternary alcohol system. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 16071-16077.	1.3	14
758	Multi-scale mathematical modeling of methane-fueled SOFCs: Predicting limiting current density using a modified Fick’s model. <i>Energy Conversion and Management</i> , 2017, 148, 222-237.	4.4	24
759	LTA zeolite membranes: current progress and challenges in pervaporation. <i>RSC Advances</i> , 2017, 7, 29520-29539.	1.7	107
760	Characterization of Composition-Dependent Maxwell–Stefan Diffusivities in Mixtures of Polydimethylsiloxane, Nerve Agent VX, and Methanol. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 3713-3725.	1.8	4
761	Uphill diffusion of Si-interstitial during boron diffusion in silicon. <i>Indian Journal of Physics</i> , 2017, 91, 1233-1236.	0.9	2
762	Numerical simulation of the multicomponent mass transfer during Bridgman growth of CdZnTe crystal using Maxwell-Stefan diffusion model. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2017, 32, 349-357.	0.4	3
763	A comparative parametric study of a catalytic plate methane reformer coated with segmented and continuous layers of combustion catalyst for hydrogen production. <i>Journal of Power Sources</i> , 2017, 344, 85-102.	4.0	27
764	Pore-neck resistance to light gases in a microporous BTESE-derived silica: A comparison of membrane and xerogel powder. <i>Journal of Membrane Science</i> , 2017, 531, 36-46.	4.1	4
765	Single and binary surface diffusion permeation through zeolite membranes using new Maxwell-Stefan factors for Dubinin-type isotherms and occupancy-dependent kinetics. <i>Separation and Purification Technology</i> , 2017, 182, 207-218.	3.9	11
766	Entropy generation analysis of electrodialysis. <i>Desalination</i> , 2017, 413, 184-198.	4.0	38
767	Adsorption and Surface Diffusion of Supercritical Methane in Shale. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 3446-3455.	1.8	45
768	Numerical study of methane steam reforming and methane combustion over the segmented and continuously coated layers of catalysts in a plate reactor. <i>Fuel Processing Technology</i> , 2017, 158, 57-72.	3.7	52
769	Catalyst Layer Modeling. , 2017, , 259-285.		1
770	A Quantitative Study on the Evolution of the Asphaltene Distribution during Gas Charge Processes. , 2017, , .		3
771	Mass transfer model, preparation and applications of zeolite membranes for pervaporation dehydration: A review. <i>Chinese Journal of Chemical Engineering</i> , 2017, 25, 1627-1638.	1.7	38
772	A Unified Model for Evaluating Multiscale Gas Flow Capacity in &lt;br/&gt;Organic-Rich Shale. , 2017, , .		0
773	A coupled, non-isothermal gas shale flow model: Application to evaluation of gas-in-place in shale with core samples. <i>Journal of Petroleum Science and Engineering</i> , 2017, 158, 361-379.	2.1	15

#	ARTICLE	IF	CITATIONS
774	Mixed matrix membranes applications: Development of a resistance-based model. Journal of Membrane Science, 2017, 543, 351-360.	4.1	19
775	A Distributed Charge Transfer Model for IT-SOFCs Based on Ceria Electrolytes. Journal of the Electrochemical Society, 2017, 164, F1249-F1264.	1.3	21
777	Fractional derivatives and their applications in reservoir engineering problems: A review. Journal of Petroleum Science and Engineering, 2017, 157, 312-327.	2.1	38
778	Degradation Mechanisms in Solid-Oxide Fuel and Electrolyzer Cells: Analytical Description of Nickel Agglomeration in a $\frac{Ni}{Ni + Y + S + Z}$ Electrode. Physical Review Applied, 2017, 7, .	1.5	15
779	Three-dimensional numerical simulation of solid oxide fuel cell cathode based on lattice Boltzmann method with sub-grid scale models. International Journal of Hydrogen Energy, 2017, 42, 21886-21900.	3.8	11
780	A Multi-Scale Modelling Approach and Experimental Calibration Applied to Commercial SOFCs. ECS Transactions, 2017, 78, 2645-2658.	0.3	3
781	Fluid distributions during light hydrocarbon charges into oil reservoirs using multicomponent Maxwell-Stefan diffusivity in gravitational field. Fuel, 2017, 209, 211-223.	3.4	11
782	Self-diffusivity, $D^*$ and Fick diffusivity of CO <sub>2</sub> in Na-clay: The influences of concentration and temperature. Scientific Reports, 2017, 7, 5403.	1.6	4
783	On the Maxwell-Stefan diffusion limit for a mixture of monatomic gases. Mathematical Methods in the Applied Sciences, 2017, 40, 803-813.	1.2	14
784	Particle-based modeling of heterogeneous chemical kinetics including mass transfer. Physical Review E, 2017, 96, 022115.	0.8	7
785	Assessing Electrolyte Transport Properties with Molecular Dynamics. Journal of the Electrochemical Society, 2017, 164, A1258-A1267.	1.3	5
786	Characterising the evaporation kinetics of water and semi-volatile organic compounds from viscous multicomponent organic aerosol particles. Physical Chemistry Chemical Physics, 2017, 19, 31634-31646.	1.3	21
787	Reservoir Fluid Geodynamics: The Chemistry and Physics of Oilfield Reservoir Fluids after Trap Filling. Energy & Fuels, 2017, 31, 13088-13119.	2.5	23
788	Chromatographic separation and liquid drop-out in unconventional gas reservoirs. Journal of Petroleum Science and Engineering, 2017, 159, 553-563.	2.1	7
789	Mass Transport in Porous Liquid Phase Membranes. , 2017, , 337-358.		1
790	Modelling and simulation of an alkaline electrolyser cell. Energy, 2017, 138, 316-331.	4.5	62
791	Modeling mass transfer and reaction of dilute solutes in a ternary phase system by the lattice Boltzmann method. Physical Review E, 2017, 95, 043304.	0.8	16
792	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

#	ARTICLE	IF	CITATIONS
793	Analytical Model for Shale Gas Transportation from Matrix to Fracture Network. , 2017, , .		2
794	Modeling of mass transfer in apparatuses with a stationary granular bed taking into account the phase temperature difference. Theoretical Foundations of Chemical Engineering, 2017, 51, 320-326.	0.2	1
795	Modeling the evaporation of sessile multi-component droplets. Journal of Colloid and Interface Science, 2017, 487, 426-436.	5.0	91
796	One-dimensional modeling of pervaporation systems using a semi-empirical flux model. Separation and Purification Technology, 2017, 174, 502-512.	3.9	19
797	A New Method for the Estimation of Lost Gas During the Measurement of the Gas Content of Coal. SPE Reservoir Evaluation and Engineering, 2017, 20, 627-638.	1.1	11
798	Influence of catalyst pore network structure on the hysteresis of multiphase reactions. AIChE Journal, 2017, 63, 78-86.	1.8	15
799	Detailed study on self- and multicomponent diffusion of CO <sub>2</sub> -CH <sub>4</sub> gas mixture in coal by molecular simulation. Fuel, 2017, 187, 220-228.	3.4	61
800	Ultra-microporous membrane separation using toluene to simulate tar-containing gases. Fuel Processing Technology, 2017, 161, 259-264.	3.7	4
801	Reactionâ€“diffusion systems of Maxwellâ€“Stefan type with reversible mass-action kinetics. Nonlinear Analysis: Theory, Methods & Applications, 2017, 159, 264-284.	0.6	27
802	Separation of methanol-dimethyl carbonate vapour mixtures with PDMS and PTMSP membranes. Separation and Purification Technology, 2017, 174, 1-11.	3.9	20
803	Solid Oxide Fuel Cells Modeling. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2017, , 291-342.	0.3	4
804	Advances in Medium and High Temperature Solid Oxide Fuel Cell Technology. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2017, , .	0.3	15
805	Pore-scale lattice Boltzmann simulation of micro-gaseous flow considering surface diffusion effect. International Journal of Coal Geology, 2017, 169, 62-73.	1.9	54
806	An efficient approach for treating composition-dependent diffusion within organic particles. Atmospheric Chemistry and Physics, 2017, 17, 10477-10494.	1.9	6
808	1.2 Modeling and Simulation of Membrane Structure and Transport Properties. , 2017, , 17-56.		0
809	1.17 Physical Chemistry Characterization of Polymeric Membranes. , 2017, , 445-482.		0
810	Predicting the Kinetics of Ice Recrystallization in Aqueous Sugar Solutions. Crystal Growth and Design, 2018, 18, 2405-2416.	1.4	12
811	A combined model of heat and mass transfer for the in situ extraction of volatile water from lunar regolith. Icarus, 2018, 306, 1-15.	1.1	27

#	ARTICLE	IF	CITATIONS
813	Improved performance of a catalytic plate reactor coated with distributed layers of reforming and combustion catalysts for hydrogen production. <i>Reaction Chemistry and Engineering</i> , 2018, 3, 487-514.	1.9	8
814	Maxwell-Stefan diffusion: a framework for predicting condensed phase diffusion and phase separation in atmospheric aerosol. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 1629-1642.	1.9	16
815	A Monte-Carlo-based sensitivity analysis of multicomponent diffusion in porous catalysts. <i>Chemical Engineering Science</i> , 2018, 185, 282-291.	1.9	14
816	Three dimensional electrochemical simulation of solid oxide fuel cell cathode based on microstructure reconstructed by marching cubes method. <i>Journal of Power Sources</i> , 2018, 385, 91-99.	4.0	16
817	Description of butanol aqueous solution transport through commercial PDMS pervaporation membrane using extended Maxwell-Stefan model. <i>Separation Science and Technology</i> , 2018, 53, 1611-1627.	1.3	23
818	Experimental and modelling studies of pervaporative removal of odorous diacetyl and S-methylthiobutanoate from aqueous solutions using PEBA membrane. <i>Separation and Purification Technology</i> , 2018, 200, 1-10.	3.9	11
819	Cross-diffusion effects on a morphochemical model for electrodeposition. <i>Applied Mathematical Modelling</i> , 2018, 57, 492-513.	2.2	16
820	Modeling and experiments for the time-dependent diffusion coefficient during methane desorption from coal. <i>Journal of Geophysics and Engineering</i> , 2018, 15, 315-329.	0.7	20
821	Closed-loop spray drying solutions for energy efficient powder production. <i>Innovative Food Science and Emerging Technologies</i> , 2018, 47, 24-37.	2.7	26
822	Molecular Dynamic Simulation of Self- and Transport Diffusion for CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> in Low-Rank Coal Vitrinite. <i>Energy &amp; Fuels</i> , 2018, 32, 3085-3096.	2.5	72
823	On Entropy Generation and the Effect of Heat and Mass Transfer Coupling in a Distillation Process. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2018, 43, 57-74.	2.4	1
824	Computational investigation on nitrogen displacement process in a thermal environment simulation chamber. <i>Science and Technology for the Built Environment</i> , 2018, 24, 343-355.	0.8	1
825	Nature-Inspired Optimization of Transport in Porous Media. , 2018, , 203-232.		5
826	Macroscopic modeling of solid oxide fuel cell (SOFC) and model-based control of SOFC and gas turbine hybrid system. <i>Progress in Energy and Combustion Science</i> , 2018, 66, 83-140.	15.8	118
827	Investigating the effects of gas type and operation mode in enhanced gas recovery in unconventional reservoirs. <i>Journal of Natural Gas Science and Engineering</i> , 2018, 50, 282-292.	2.1	10
828	Master role conversion between diffusion and seepage on coalbed methane production: Implications for adjusting suction pressure on extraction borehole. <i>Fuel</i> , 2018, 223, 373-384.	3.4	45
829	Finite-Size Effects of Binary Mutual Diffusion Coefficients from Molecular Dynamics. <i>Journal of Chemical Theory and Computation</i> , 2018, 14, 2667-2677.	2.3	121
830	Experimental validation of a La <sub>0.6</sub> Sr <sub>0.4</sub> Co <sub>0.2</sub> Fe <sub>0.8</sub> O <sub>3-<math>\delta</math></sub> electrode model operated in electrolysis mode: Understanding the reaction pathway under anodic polarization. <i>Solid State Ionics</i> , 2018, 319, 234-246.	1.3	16

#	ARTICLE	IF	CITATIONS
831	Underground coal gasification “ Part II: Fundamental phenomena and modeling. Progress in Energy and Combustion Science, 2018, 67, 234-274.	15.8	82
832	Selectivity of ion exchange membranes: A review. Journal of Membrane Science, 2018, 555, 429-454.	4.1	722
833	A new rate-transient analysis model for shale gas reservoirs coupled the effect of slip flow and surface diffusion. International Journal of Heat and Mass Transfer, 2018, 124, 1-10.	2.5	24
834	Vapor-gap membranes for highly selective osmotically driven desalination. Journal of Membrane Science, 2018, 555, 407-417.	4.1	31
835	On factors affecting coalbed gas content measurement. Measurement: Journal of the International Measurement Confederation, 2018, 121, 47-56.	2.5	18
836	Multicomponent transport in nanoporous networks: Theory and simulation. Chemical Engineering Journal, 2018, 346, 748-761.	6.6	5
837	Bioregeneration of Chabazite During Nitrification of Centrate from Anaerobically Digested Livestock Waste: Experimental and Modeling Studies. Environmental Science & Technology, 2018, 52, 4090-4098.	4.6	21
838	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. Energy and Environmental Science, 2018, 11, 1177-1196.	15.6	740
839	Pressure-swing-adsorption of gaseous mixture in isotropic porous medium: Transient 3D modeling and validation. Chemical Engineering Journal, 2018, 348, 1049-1062.	6.6	11
840	Existence and uniqueness analysis of a non-isothermal cross-diffusion system of Maxwell–Stefan type. Applied Mathematics Letters, 2018, 75, 108-113.	1.5	8
841	A simulation model for methane emissions from landfills with interaction of vegetation and cover soil. Waste Management, 2018, 71, 267-276.	3.7	11
842	Predicting mass fluxes in the pervaporation process using Maxwell-Stefan diffusion coefficients. Journal of Membrane Science, 2018, 546, 111-119.	4.1	14
843	Experimental Investigation on Permeability and Porosity Hysteresis of Tight Formations. SPE Journal, 2018, 23, 672-690.	1.7	35
844	Simultaneous monitoring of different vitrification solution components permeating into tissues. Analyst, The, 2018, 143, 420-428.	1.7	17
845	Methane diffusion in shales with multiple pore sizes at supercritical conditions. Chemical Engineering Journal, 2018, 334, 1455-1465.	6.6	95
846	On negative rejection of uncharged organic solutes in forward osmosis. Journal of Membrane Science, 2018, 548, 22-31.	4.1	8
847	Synthesis, dynamic characterization, and modeling studies of an AM-3 membrane for light gases separation. Microporous and Mesoporous Materials, 2018, 261, 170-180.	2.2	3
849	One-Dimensional Simulation of Synergistic Desulfurization and Denitrification Processes for Electrostatic Precipitators Based on a Fluid-Chemical Reaction Hybrid Model. Energies, 2018, 11, 3249.	1.6	6

#	ARTICLE	IF	CITATIONS
852	Composition dependent transport diffusion in non-ideal mixtures from spatially resolved nuclear magnetic resonance spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 28185-28192.	1.3	5
853	Optimizing Nonbonded Interactions of the OPLS Force Field for Aqueous Solutions of Carbohydrates: How to Capture Both Thermodynamics and Dynamics. <i>Journal of Chemical Theory and Computation</i> , 2018, 14, 6690-6700.	2.3	20
854	Molecular Simulation and Analysis of Sorption Process toward Theoretical Prediction for Liquid Permeation through Membranes. <i>Journal of Physical Chemistry B</i> , 2018, 122, 12211-12218.	1.2	7
855	Introduction to Biopharmaceutical Processes. , 0, , 1-26.		0
856	Countercurrent Separation Processes. , 0, , 84-109.		0
857	Countercurrent Chromatography for the Capture Step. , 0, , 110-152.		0
858	Countercurrent Chromatography for the Polishing Steps. , 0, , 153-202.		0
859	Protein Conjugation. , 0, , 203-246.		0
860	Protein Aggregation in Biopharmaceutical Processes. , 0, , 247-298.		0
864	Application of Reverse Nonequilibrium Molecular Dynamics to the Calculation of the Mutual Diffusion Coefficient of Alkane Mixtures. <i>Journal of Physical Chemistry B</i> , 2018, 122, 9210-9217.	1.2	8
865	Fundamentals of Protein Chromatography. , 0, , 27-83.		0
866	Prediction of Composition-Dependent Self-Diffusion Coefficients in Binary Liquid Mixtures: The Missing Link for Darken-Based Models. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 14784-14794.	1.8	26
867	A one-dimensional transport model for multi-component solute in saturated soil. <i>Water Science and Engineering</i> , 2018, 11, 236-242.	1.4	4
868	Ceramic Membranes, Preparation, Properties, and Investigation on CO2 Separation. , 2018, , 185-207.		4
869	Superficial transportation model using finite volume method. <i>Theoretical and Computational Fluid Dynamics</i> , 2018, 32, 689-711.	0.9	0
870	Development of a Sensing Platform for Nuisance Sewer Gas Monitoring: Hydrogen Sulfide Detection in Aqueous Versus Gaseous Samples. <i>IEEE Sensors Journal</i> , 2018, 18, 7772-7778.	2.4	12
871	Hybrid algal photosynthesis and ion exchange (HAPIX) process for high ammonium strength wastewater treatment. <i>Water Research</i> , 2018, 142, 65-74.	5.3	36
872	Electrical conductivity of viscous liquid foods. <i>Journal of Food Engineering</i> , 2018, 237, 177-182.	2.7	10



#	ARTICLE	IF	CITATIONS
873	A Simulation model for estimating methane oxidation and emission from landfill cover soils. Waste Management, 2018, 77, 426-434.	3.7	20
874	Recent Advances in Zeolitic Membranes. Annual Review of Materials Research, 2018, 48, 83-110.	4.3	29
875	Asymmetry of Hydrogen Transfer through a Composite Membrane. Colloid Journal, 2018, 80, 326-330.	0.5	2
876	A three dimensional multiphysics model of a solid oxide electrochemical cell: A tool for understanding degradation. International Journal of Hydrogen Energy, 2018, 43, 11913-11931.	3.8	38
877	A predictive model for the diffusion of a highly non-ideal ternary system. Physical Chemistry Chemical Physics, 2018, 20, 18436-18446.	1.3	15
878	Application of TiC in Vanadium-Based Hydrogen Membranes. Industrial & Engineering Chemistry Research, 2018, 57, 16084-16094.	1.8	19
879	A numerical study of buoyancy-Marangoni convection of volatile binary fluids in confined geometries. International Journal of Heat and Mass Transfer, 2018, 127, 308-320.	2.5	7
880	Thermoelectromagnetics. , 2018, , 333-349.		0
881	Tailored catalyst pellet specification for improved fixed-bed transport characteristics: A shortcut method for the model-based reactor design. Chemical Engineering Research and Design, 2018, 137, 60-74.	2.7	10
882	Thinning of Cathode Catalyst Layer in Polymer Electrolyte Fuel Cells Due to Foreign Cation Contamination. Journal of the Electrochemical Society, 2018, 165, F3015-F3023.	1.3	19
883	Evidence for entropic diffusion selection of xylene isomers in carbon molecular sieve membranes. Journal of Membrane Science, 2018, 564, 404-414.	4.1	45
884	Thermohydromechanics. , 2018, , 237-248.		0
886	Influence of distributed pore size and porosity on MTO catalyst particle performance: Modeling and simulation. Chemical Engineering Research and Design, 2018, 137, 141-153.	2.7	18
887	Discrimination among gas translation, surface and Knudsen diffusion in permeation through zeolite membranes. Journal of Membrane Science, 2018, 564, 166-173.	4.1	37
888	Effectiveness factor correlations from simulations of washcoat nickel catalyst layers for small-scale steam methane reforming applications. International Journal of Hydrogen Energy, 2018, 43, 15398-15411.	3.8	21
889	A fast regression model for the interpretation of electrochemical impedance spectra of Intermediate Temperature Solid Oxide Fuel Cells. Journal of Electroanalytical Chemistry, 2018, 823, 697-712.	1.9	7
890	Multiphysics in Porous Materials. , 2018, , .		13
891	Healing of Microdefects in SSZ-13 Membranes via Filling with Dye Molecules and Its Effect on Dry and Wet CO <sub>2</sub> Separations. Chemistry of Materials, 2018, 30, 3346-3358.	3.2	48

#	ARTICLE	IF	CITATIONS
892	Time-fractional characterization of brine reaction and precipitation in porous media. <i>Physical Review E</i> , 2018, 97, 042133.	0.8	1
893	Molecular Insight into the Liquid Propan-2-ol + Water Mixture. <i>Journal of Physical Chemistry B</i> , 2018, 122, 8718-8729.	1.2	25
894	Development of a Multiphysical 2-D Model of a PEM Fuel Cell for Real-Time Control. <i>IEEE Transactions on Industry Applications</i> , 2018, 54, 4864-4874.	3.3	10
895	Experimental study of impact of anisotropy and heterogeneity on gas flow in coal. Part I: Diffusion and adsorption. <i>Fuel</i> , 2018, 232, 444-453.	3.4	54
897	Diffusivities of metal acetylacetonates in liquid ethanol and comparison with the transport behavior in supercritical systems. <i>Journal of Supercritical Fluids</i> , 2019, 143, 259-267.	1.6	4
898	A modeling study on reaction and diffusion in MTO process over SAPO-34 zeolites. <i>Chemical Engineering Journal</i> , 2019, 377, 119668.	6.6	50
899	Dynamic optimization and experimental validation of a pilot scale emulsion polymerization reactor. <i>Chemical Engineering and Processing: Process Intensification</i> , 2019, 144, 107635.	1.8	4
900	A review of analytical and semi-analytical fluid flow models for ultra-tight hydrocarbon reservoirs. <i>Fuel</i> , 2019, 256, 115737.	3.4	41
901	Strict Equivalence between Maxwell–Stefan and Fast-Mode Theory for Multicomponent Polymer Mixtures. <i>Macromolecules</i> , 2019, 52, 6035-6044.	2.2	4
902	Understanding microfluidic-based gas detectors: A numerical model to investigate fundamental sensor operation, influencing phenomena and optimum geometries. <i>Sensors and Actuators B: Chemical</i> , 2019, 300, 126904.	4.0	9
903	The general theory of diffusion in a mixture of molecules coadsorbed on a homogeneous two-dimensional lattice. <i>Chemical Engineering Science</i> , 2019, 206, 261-271.	1.9	6
904	Ethylene Hydrogenation in Pellets with Different Pore Structures, Measured in a One-Sided Single-Pellet Reactor. <i>International Journal of Chemical Reactor Engineering</i> , 2019, 17, .	0.6	1
905	Membrane desalination performance governed by molecular reflection at the liquid-vapor interface. <i>International Journal of Heat and Mass Transfer</i> , 2019, 140, 1006-1022.	2.5	13
906	Adsorption and Capillary Condensation-Induced Imbibition in Nanoporous Media. <i>Langmuir</i> , 2019, 35, 9611-9621.	1.6	18
907	Quantifying Pore Width Effects on Diffusivity via a Novel 3D Stochastic Approach with Input from Atomistic Molecular Dynamics Simulations. <i>Journal of Chemical Theory and Computation</i> , 2019, 15, 6907-6922.	2.3	21
908	Thermal and chemical reaction performance analyses of solar thermochemical volumetric receiver/reactor with nanofluid. <i>Energy</i> , 2019, 189, 116123.	4.5	11
909	CFD Modeling to Predict Mass Transfer in Multicomponent Mixtures. <i>Chemical Product and Process Modeling</i> , 2019, 14, .	0.5	1
910	Shale gas transport behavior considering dynamic changes in effective flow channels. <i>Energy Science and Engineering</i> , 2019, 7, 2059-2076.	1.9	12

#	ARTICLE	IF	CITATIONS
911	Diffusion models for mixtures using a stiff dissipative hyperbolic formalism. <i>Journal of Hyperbolic Differential Equations</i> , 2019, 16, 293-312.	0.3	3
912	Multicomponent mutual diffusion in the warm, dense matter regime. <i>Physical Review E</i> , 2019, 100, 033213.	0.8	13
913	Electrochemical gas phase oxidation of hydrogen chloride to chlorine: Model-based analysis of transport and reaction mechanisms. <i>Electrochimica Acta</i> , 2019, 324, 134780.	2.6	4
914	Experimental and numerical analyses of apparent gas diffusion coefficient in gas shales. <i>Fuel</i> , 2019, 258, 116123.	3.4	16
915	Water vapor permeation and its influence on gases through a zeolite-4A membrane. <i>Journal of Membrane Science</i> , 2019, 574, 154-163.	4.1	8
917	Mixed-gas sorption in polymers via a new barometric test system: sorption and diffusion of CO <sub>2</sub> -CH <sub>4</sub> mixtures in polydimethylsiloxane (PDMS). <i>Journal of Membrane Science</i> , 2019, 577, 195-204.	4.1	34
918	A numerical scheme for a kinetic model for mixtures in the diffusive limit using the moment method. <i>Numerical Methods for Partial Differential Equations</i> , 2019, 35, 1184-1205.	2.0	5
919	Low-temperature heat utilization with vapor pressure-driven osmosis: Impact of membrane properties on mass and heat transfer. <i>Journal of Membrane Science</i> , 2019, 588, 117181.	4.1	10
920	A multimodular pseudoheterogeneous model framework for optimal design of catalytic reactors exemplified by methanol synthesis. <i>Chemical Engineering Science</i> , 2019, 206, 401-423.	1.9	14
921	A novel numerical model of gas transport in multiscale shale gas reservoirs with considering surface diffusion and Langmuir slip conditions. <i>Energy Science and Engineering</i> , 2019, 7, 1315-1332.	1.9	13
922	Modeling of PEM Fuel Cell Catalyst Layers: Status and Outlook. <i>Electrochemical Energy Reviews</i> , 2019, 2, 428-466.	13.1	60
923	From Laboratory to Industrial Operation: Model-Based Digital Design and Optimization of Fixed-Bed Catalytic Reactors. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 12571-12585.	1.8	7
924	Three-dimensional micro/macroscale simulation of planar, anode-supported, intermediate-temperature solid oxide fuel cells: I. Model development for hydrogen fueled operation. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 15456-15481.	3.8	6
925	Gas Multiple Flow Mechanisms and Apparent Permeability Evaluation in Shale Reservoirs. <i>Sustainability</i> , 2019, 11, 2114.	1.6	17
926	Fick Diffusion Coefficients of the Gaseous CH <sub>4</sub> -CO <sub>2</sub> System from Molecular Dynamics Simulations Using TraPPE Force Fields at 101.325, 506.625, 1013.25, 2533.12, and 5066.25 kPa. <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 3672-3681.	1.0	14
927	Ion-vacancy coupled charge transfer model for ion transport in concentrated solutions. <i>Science China Chemistry</i> , 2019, 62, 515-520.	4.2	15
928	Characteristics of Gas Permeation Behaviour in Multilayer Thin Film Composite Membranes for CO <sub>2</sub> Separation. <i>Membranes</i> , 2019, 9, 22.	1.4	11
929	Maxwell-Stefan model of multicomponent ion transport inside a monolayer Nafion membrane for intensified chlor-alkali electrolysis. <i>Journal of Applied Electrochemistry</i> , 2019, 49, 353-368.	1.5	11

#	ARTICLE	IF	CITATIONS
930	Diffusion and Flow of CO <sub>2</sub> in Carbon Anode for Aluminium Smelting. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 846-856.	1.0	1
931	Theory and Kinetic Monte Carlo Simulation of Guest Molecule Transport in sl Clathrate Hydrates Based on Cage Hopping. Journal of Physical Chemistry C, 2019, 123, 11233-11243.	1.5	5
932	Development of a Multiscale SOFC Model and Application to Axially Graded Electrode Design. Fuel Cells, 2019, 19, 125-140.	1.5	11
933	Numerical and Experimental Analysis of Diffusion and Sorption Kinetics Effects in Marcellus Shale Gas Transport. , 2019, , .		11
934	General Dusty Gas Model for porous media with a specified pore size distribution. Chemical Engineering Science, 2019, 203, 293-301.	1.9	18
935	Membrane separation processes for dehydration of bioethanol from fermentation broths: Recent developments, challenges, and prospects. Renewable and Sustainable Energy Reviews, 2019, 105, 427-443.	8.2	94
936	Smoothed particle hydrodynamics model for simulating miscible multi-fluid flow. Journal of Computational Physics, 2019, 384, 114-133.	1.9	3
937	Full-Scale Membrane Distillation Systems and Performance Improvement Through Modeling. , 2019, , 105-140.		3
938	Numerical simulation of La <sub>0.6</sub> Sr <sub>0.4</sub> Co <sub>0.2</sub> Fe <sub>0.8</sub> O <sub>3</sub> - Gd <sub>0.1</sub> Ce <sub>0.9</sub> O <sub>1.95</sub> composite cathodes with micro pillars. International Journal of Hydrogen Energy, 2019, 44, 6871-6885.	3.8	19
939	Thermomechanical Point of View of the Effect of Pressure and Free Volume on the Molecular Diffusion Coefficients. Journal of Chemical & Engineering Data, 2019, 64, 1956-1969.	1.0	2
940	A Simple Methodology to Estimate the Diffusion Coefficient in Pervaporation-Based Purification Experiments. Polymers, 2019, 11, 343.	2.0	21
941	Maxwell-Stefan-theory-based lattice Boltzmann model for diffusion in multicomponent mixtures. Physical Review E, 2019, 99, 023312.	0.8	25
942	OCTP: A Tool for On-the-Fly Calculation of Transport Properties of Fluids with the Order- <i>n</i> Algorithm in LAMMPS. Journal of Chemical Information and Modeling, 2019, 59, 1290-1294.	2.5	67
943	Study on the Separation of H <sub>2</sub> from CO <sub>2</sub> Using a ZIF-8 Membrane by Molecular Simulation and Maxwell-Stefan Model. Molecules, 2019, 24, 4350.	1.7	9
944	Spectroscopic monitoring of transport processes during loading of ovarian tissue with cryoprotective solutions. Scientific Reports, 2019, 9, 15577.	1.6	13
945	Intensification of Catalytic Processes through the Pellet Structuring: Steady-State Properties of a Bifunctional Catalyst Pellet Applied to Generic Chemical Reactions and the Direct Synthesis of DME. Catalysts, 2019, 9, 1020.	1.6	13
946	Mass Transport Through a Membrane Layer. , 2019, , 21-68.		13
947	Diffusion Through a Plane Membrane Layer. , 2019, , 91-118.		0

#	ARTICLE	IF	CITATIONS
948	Pervaporation. , 2019, , 429-445.		1
949	Hybrid Numerical Simulation of Decomposition of SF6 Under Negative DC Partial Discharge Process. Plasma Chemistry and Plasma Processing, 2019, 39, 205-226.	1.1	19
950	Asymmetric membranes for membrane distillation and thermo-osmotic energy conversion. Desalination, 2019, 452, 141-148.	4.0	46
951	Investigation of multi-gas transport behavior in shales via a pressure pulse method. Chemical Engineering Journal, 2019, 360, 1667-1677.	6.6	30
952	Isotope fractionation due to aqueous phase diffusion –“ What do diffusion models and experiments tell? –“ A review. Chemosphere, 2019, 219, 1032-1043.	4.2	20
953	Kirkwood-Buff integrals from molecular simulation. Fluid Phase Equilibria, 2019, 486, 21-36.	1.4	53
954	Advanced modeling of vegetable oils steam stripping with structured packing columns. Computers and Chemical Engineering, 2019, 121, 654-669.	2.0	10
955	Multiscale structures in particle–fluid systems: Characterization, modeling, and simulation. Chemical Engineering Science, 2019, 198, 198-223.	1.9	85
956	A finite strain electro-chemo-mechanical theory for ion transport with application to binary solid electrolytes. Journal of the Mechanics and Physics of Solids, 2019, 125, 681-713.	2.3	59
957	Diffusing uphill with James Clerk Maxwell and Josef Stefan. Chemical Engineering Science, 2019, 195, 851-880.	1.9	32
958	Towards a particle based approach for multiscale modeling of heterogeneous catalytic reactors. Chemical Engineering Science, 2019, 198, 184-197.	1.9	12
959	Organic solvent nanofiltration of binary vegetable oil/terpene mixtures: Experiments and modelling. Journal of Membrane Science, 2019, 573, 694-703.	4.1	22
960	Fluctuating Hydrodynamics and Debye-Hückel-Onsager Theory for Electrolytes. Current Opinion in Electrochemistry, 2019, 13, 1-10.	2.5	18
961	An alternative model of multicomponent diffusion based on a combination of the Maxwell-Stefan theory and continuum mechanics. Journal of Computational Physics, 2020, 400, 108962.	1.9	7
962	Measurement of astaxanthin and squalene diffusivities in compressed liquid ethyl acetate by Taylor-Aris dispersion method. Separation and Purification Technology, 2020, 234, 116046.	3.9	9
963	Interactions between feed solutes and inorganic electrolytic draw solutes in forward osmosis. Journal of Membrane Science, 2020, 597, 117636.	4.1	6
964	Mutual influence in permeation of CO2-containing mixtures through a SAPO-34 membrane. Journal of Membrane Science, 2020, 595, 117534.	4.1	11
965	Biodiesel production integrated with glycerol steam reforming process, solid oxide fuel cell (SOFC) power plant. Energy Conversion and Management, 2020, 206, 112467.	4.4	45

#	ARTICLE	IF	CITATIONS
966	Effect of Geological Depths on CH <sub>4</sub> Adsorption, Diffusion, and Swelling in Kaolinite by Molecular Simulations. <i>Energy &amp; Fuels</i> , 2020, 34, 1620-1626.	2.5	11
967	Numerical and Experimental Study of Enhanced Shale-Oil Recovery by CO <sub>2</sub> Miscible Displacement with NMR. <i>Energy &amp; Fuels</i> , 2020, 34, 1524-1536.	2.5	26
968	Advection diffusion model for gas transport within a packed bed of JSC-1A regolith simulant. <i>Acta Astronautica</i> , 2020, 169, 32-39.	1.7	8
969	Influence of support layer resistance on oxygen fluxes through asymmetric membranes based on perovskite-type oxides SrTi <sub>1-x</sub> Fe <sub>x</sub> O <sub>3-δ</sub> . <i>Journal of Membrane Science</i> , 2020, 596, 117704.	4.1	18
970	Free-surface flow of confined volatile simple fluids driven by a horizontal temperature gradient: From a comprehensive numerical model to a simplified analytical description. <i>International Journal of Heat and Mass Transfer</i> , 2020, 147, 118934.	2.5	2
971	A new model for the transport of gaseous hydrocarbon in shale nanopores coupling real gas effect, adsorption, and multiphase pore fluid occupancies. <i>International Journal of Heat and Mass Transfer</i> , 2020, 148, 119026.	2.5	10
972	Effect of pH on Total Volume Membrane Charge Density in the Nanofiltration of Aqueous Solutions of Nitrate Salts of Heavy Metals. <i>Membranes</i> , 2020, 10, 235.	1.4	12
973	Transport phenomena in electrolyte solutions: Nonequilibrium thermodynamics and statistical mechanics. <i>AIChE Journal</i> , 2020, 66, e17091.	1.8	37
974	Evaluating diffusion and the thermodynamic factor for binary ionic mixtures. <i>Physics of Plasmas</i> , 2020, 27, .	0.7	10
975	Model Analysis of the Effects of Active Phase Distribution at the Pellet Scale in Catalytic Reactors for the Direct Dimethyl Ether Synthesis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 14252-14266.	1.8	13
976	CH <sub>4</sub> , CO <sub>2</sub> , N <sub>2</sub> diffusion in Bowen Basin (Australia) coal: relationship between sorption kinetics of coal core and crushed coal particles. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 81, 103468.	2.1	22
977	Modelling of redox flow battery electrode processes at a range of length scales: a review. <i>Sustainable Energy and Fuels</i> , 2020, 4, 5433-5468.	2.5	29
978	Multicomponent landfill gas transport in soil cover: column tests and numerical modelling. <i>Environmental Geotechnics</i> , 2023, 10, 3-18.	1.3	5
979	A Numerical Model of Vapour Transfer and Phase Change in Unsaturated Freezing Soils. <i>Advances in Civil Engineering</i> , 2020, 2020, 1-11.	0.4	0
980	Chemical kinetics for operando electron microscopy of catalysts: 3D modeling of gas and temperature distributions during catalytic reactions. <i>Ultramicroscopy</i> , 2020, 218, 113080.	0.8	7
981	Frame-invariant Fick diffusion matrices of multicomponent fluid mixtures. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 17597-17604.	1.3	6
982	On the Role of Molecular Diffusion in Modelling Enhanced Recovery in Unconventional Condensate Reservoirs. , 2020, , .		5
983	Multiphase and multicomponent simulation of acid mine drainage in unsaturated mine waste: Modeling approach, benchmarks and application examples. <i>Applied Geochemistry</i> , 2020, 120, 104677.	1.4	22

#	ARTICLE	IF	CITATIONS
984	A multiscale approach for simulation of shale gas transport in organic nanopores. <i>Energy</i> , 2020, 210, 118547.	4.5	39
985	A kinetic model of gas-particle mass transfer in aerosol: Application to phase state in aerosol. <i>Powder Technology</i> , 2020, 375, 453-462.	2.1	1
986	Fate of Residual Pesticides in Fruit and Vegetable Waste (FVW) Processing. <i>Foods</i> , 2020, 9, 1468.	1.9	40
987	A Mechanistic Mixing Model for Miscible Gas Injection in Tight Oil Reservoirs. , 2020, , .		0
988	New Slip Coefficient Model Considering Adsorbed Gas Diffusion in Shale Gas Reservoirs. <i>Energy &amp; Fuels</i> , 2020, 34, 12078-12087.	2.5	12
989	Enhancement of the Direct Synthesis of Dimethyl Ether (DME) from Synthesis Gas by Macro- and Microstructuring of the Catalytic Bed. <i>Catalysts</i> , 2020, 10, 852.	1.6	10
990	Oxygen Transport Membranes for Efficient Glass Melting. <i>Membranes</i> , 2020, 10, 442.	1.4	6
991	Simulation of Diffusion Bonding of Different Heat Resistant Nickel-Base Alloys. <i>Computation</i> , 2020, 8, 102.	1.0	5
992	Molar Volume Mismatch: A Malefactor for Irregular Metallic Electrodeposition with Solid Electrolytes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 082510.	1.3	44
993	Modeling and simulation of gas separations with spiral-wound membranes. <i>AIChE Journal</i> , 2020, 66, e16274.	1.8	4
994	Model-based interpretation of methane oxidation and respiration processes in landfill biocovers: 3-D simulation of laboratory and pilot experiments. <i>Waste Management</i> , 2020, 108, 160-171.	3.7	14
995	Concentrating water-soluble ionic liquids from aqueous solutions: Osmotic distillation with hydrophobic membranes. <i>Journal of Membrane Science</i> , 2020, 608, 118222.	4.1	11
996	Model-Based Analysis of the Limiting Mechanisms in the Gas-Phase Oxidation of HCl Employing an Oxygen Depolarized Cathode. <i>Journal of the Electrochemical Society</i> , 2020, 167, 013537.	1.3	2
997	Laboratory study of cryogenic treatment induced pore-scale structural alterations of Illinois coal and their implications on gas sorption and diffusion behaviors. <i>Journal of Petroleum Science and Engineering</i> , 2020, 194, 107507.	2.1	29
998	Concentration of unconventional methane resources using microporous membranes: Process assessment and scale-up. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 81, 103420.	2.1	8
999	Theory of ion aggregation and gelation in super-concentrated electrolytes. <i>Journal of Chemical Physics</i> , 2020, 152, 234506.	1.2	49
1000	Simultaneous Optimization of Process Operational and Material Parameters for a 2-Bed Adsorption Refrigeration Process. <i>ChemEngineering</i> , 2020, 4, 31.	1.0	2
1001	Effect of catalyst shape and multicomponent diffusion flux models on intraparticle transport-kinetic interactions in the gas-phase Fischer-Tropsch synthesis. <i>Fuel</i> , 2020, 278, 118117.	3.4	6



#	ARTICLE	IF	CITATIONS
1002	A multi-scale framework for modelling effective gas diffusivity in dry cement paste: Combined effects of surface, Knudsen and molecular diffusion. Cement and Concrete Research, 2020, 131, 106035.	4.6	50
1004	Molten Carbonate Fuel Cell Performance for CO <sub>2</sub> Capture from Natural Gas Combined Cycle Flue Gas. Journal of the Electrochemical Society, 2020, 167, 064505.	1.3	31
1005	Fundamental origin of flux non-linearity in organic solvent nanofiltration: Formulation of a thermodynamic/diffusion framework. Journal of Membrane Science, 2020, 603, 118020.	4.1	26
1006	The evaporation of surfactant-laden droplets: A comparison between contact line models. Journal of Colloid and Interface Science, 2020, 579, 888-897.	5.0	13
1007	Theory of Multicomponent Phenomena in Cation-Exchange Membranes: Part II. Transport Model and Validation. Journal of the Electrochemical Society, 2020, 167, 013548.	1.3	27
1008	Transient cavity dynamics and divergence from the Stokes-Einstein equation in organic aerosol. Chemical Science, 2020, 11, 2999-3006.	3.7	7
1009	Simulation on multi-species vacuum arc considering both ionization-recombination and species diffusion processes. Physics of Plasmas, 2020, 27, 023514.	0.7	9
1010	A method of determining adsorptive-gas permeability in shale cores with considering effect of dynamic adsorption on flow. Fuel, 2020, 268, 117340.	3.4	8
1011	Hybrid electrospun membrane based on poly(vinylidene fluoride)/poly(acrylic acid)-poly(vinyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 4. 1558-1584.	1.1	8
1012	Chemical reaction modeling of industrial scale nitrocellulose production for military applications. AIChE Journal, 2020, 66, e16234.	1.8	13
1013	Novel Isothermal Membrane Distillation with Acidic Collector for Selective and Energy-Efficient Recovery of Ammonia from Urine. ACS Sustainable Chemistry and Engineering, 2020, 8, 7324-7334.	3.2	49
1014	Generalized Form for Finite-Size Corrections in Mutual Diffusion Coefficients of Multicomponent Mixtures Obtained from Equilibrium Molecular Dynamics Simulation. Journal of Chemical Theory and Computation, 2020, 16, 3799-3806.	2.3	45
1015	Drying of porous media by concurrent drainage and evaporation: A pore network modeling study. International Journal of Heat and Mass Transfer, 2020, 152, 118718.	2.5	11
1016	Multilevel modeling of solid oxide electrolysis. , 2020, , 123-166.		2
1017	On the formal derivation of the reactive Maxwell-Stefan equations from the kinetic theory. Europhysics Letters, 2020, 129, 40005.	0.7	3
1018	Apparent gas permeability behaviour in the near critical region for real gases. Journal of Natural Gas Science and Engineering, 2020, 77, 103245.	2.1	13
1019	Modelling of high temperature direct methanol solid oxide fuel cells. International Journal of Energy Research, 2021, 45, 3097-3112.	2.2	21
1020	Enhancing temperature-swing adsorption processes through desorption stage heat transfer fluid selection. International Journal of Heat and Mass Transfer, 2021, 164, 120442.	2.5	0

#	ARTICLE	IF	CITATIONS
1021	Predictive study of succinic acid transport via nanofiltration membranes using a Maxwell–Stefan approach. <i>Journal of Chemical Technology and Biotechnology</i> , 2021, 96, 785-800.	1.6	5
1022	Showerhead feed distribution for optimized performance of large scale membrane distillation modules. <i>Journal of Membrane Science</i> , 2021, 618, 118664.	4.1	15
1023	Highly selective gas sensing enabled by filters. <i>Materials Horizons</i> , 2021, 8, 661-684.	6.4	45
1024	Molecular interactions and structural studies of toluene and (C <sub>5</sub> –C <sub>10</sub> ) 1-alkanol; mutual diffusion and virial coefficients. <i>Journal of Molecular Structure</i> , 2021, 1230, 129624.	1.8	1
1025	Some studies on the mutual diffusion, Joule–Thomson inversion curve and virial coefficients of binary mixtures containing diethylamine and (C <sub>5</sub> –C <sub>9</sub> ) 1-alkanol. <i>Fluid Phase Equilibria</i> , 2021, 533, 112920.	1.4	0
1026	Nature-Inspired, Computer-Assisted Optimization of Hierarchically Structured Zeolites. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001409.	1.9	16
1027	Application of microimaging to diffusion studies in nanoporous materials. <i>Adsorption</i> , 2021, 27, 819-840.	1.4	6
1028	Impact of water film on methane surface diffusion in gas shale organic nanopores. <i>Journal of Petroleum Science and Engineering</i> , 2021, 196, 108045.	2.1	12
1029	Revisiting Tracer Liu-Silva-Macedo model for binary diffusion coefficient using the largest database of liquid and supercritical systems. <i>Journal of Supercritical Fluids</i> , 2021, 168, 105073.	1.6	9
1030	Experimental and numerical study of gas diffusion and sorption kinetics in ultratight rocks. <i>Fuel</i> , 2021, 286, 119300.	3.4	13
1031	Finite-size effects of diffusion coefficients computed from molecular dynamics: a review of what we have learned so far. <i>Molecular Simulation</i> , 2021, 47, 831-845.	0.9	87
1033	Kinetics of liquid phase batch adsorption experiments. <i>Adsorption</i> , 2021, 27, 353-368.	1.4	36
1034	Diffusion coefficients of carbon dioxide in ionic liquid, 1-butyl-3-methylimidazolium tetrafluoroborate ([bmim][BF <sub>4</sub> ]) system at temperatures of 313 K and 323 K and pressures of 5% MPa and 8% MPa. <i>Chemical Engineering Communications</i> , 2021, 208, 233-241.		3
1035	Derivation of Multicomponent Lattice Boltzmann Equations by Introducing a Nonequilibrium Distribution Function into the Maxwell Iteration Based on the Convective Scaling. <i>Journal of Statistical Physics</i> , 2021, 182, 1.	0.5	3
1036	Augmented saddle-point formulation of the steady-state Stefan–Maxwell diffusion problem. <i>IMA Journal of Numerical Analysis</i> , 2022, 42, 3272-3305.	1.5	3
1037	Influence of non-local diffusion in avascular tumour growth. <i>Mathematics and Mechanics of Solids</i> , 2021, 26, 1264-1293.	1.5	11
1038	Hydrogen production via electrolysis: Mathematical modeling approach. , 2021, , 157-193.		5
1039	Multicomponent diffusion in atmospheric aerosol particles. <i>Environmental Science Atmospheres</i> , 2021, 1, 45-55.	0.9	9

#	ARTICLE	IF	CITATIONS
1040	Diffusion of the carbon dioxide-ethanol mixture in the extended critical region. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 3106-3115.	1.3	18
1041	The Maxwell-Stefan Diffusion Limit of a Hard-Sphere Kinetic Model for Mixtures. <i>Springer Proceedings in Mathematics and Statistics</i> , 2021, , 15-36.	0.1	1
1042	Ion Correlations and Their Impact on Transport in Polymer-Based Electrolytes. <i>Macromolecules</i> , 2021, 54, 2575-2591.	2.2	50
1043	A numerical study on the active reaction thickness of nickel catalyst layers used in a low-pressure steam methane reforming process. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 7712-7721.	3.8	11
1044	Pore-Scale Simulation of Calcite Matrix Acidizing with Hydrochloric Acid. <i>SPE Journal</i> , 2021, 26, 653-666.	1.7	8
1045	A predictive model for self-, Maxwell-Stefan, and Fick diffusion coefficients of binary supercritical water mixtures. <i>Journal of Molecular Liquids</i> , 2021, 324, 114735.	2.3	13
1046	Experimental and modelling studies on combined pyrolysis and gasification of large coal particle in steam and CO <sub>2</sub> ambience. <i>Chemical Papers</i> , 2021, 75, 2907-2927.	1.0	3
1047	Modeling and Multi-Criteria Optimization of a Process for H <sub>2</sub> O <sub>2</sub> Electrosynthesis. <i>Processes</i> , 2021, 9, 399.	1.3	5
1048	Diffusion of quercetin in compressed liquid ethyl acetate and ethanol. <i>Journal of Molecular Liquids</i> , 2021, 324, 114714.	2.3	3
1049	Measuring the permeabilities of binary gas mixtures with a novel time-lag technique. <i>Canadian Journal of Chemical Engineering</i> , 0, , .	0.9	1
1050	Multi-fidelity electrochemical modeling of thermally activated battery cells. <i>Journal of Power Sources</i> , 2021, 488, 229469.	4.0	9
1051	Modeling actuation and sensing in ionic polymer metal composites by electrochemo-poromechanics. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 148, 104292.	2.3	35
1052	An adaptive binary friction model for multicomponent gas transport in tight porous media. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	3
1053	Characterization of H <sub>2</sub> O transport through Johnson Space Center number 1A lunar regolith simulant at low pressure for <i>in-situ</i> resource utilization. <i>Physics of Fluids</i> , 2021, 33, .	1.6	4
1054	Connecting theory and simulation with experiment for the study of diffusion in nanoporous solids. <i>Adsorption</i> , 2021, 27, 683-760.	1.4	72
1055	Fluid Performance in Coal Reservoirs: A Comprehensive Review. <i>Geofluids</i> , 2021, 2021, 1-33.	0.3	6
1056	A numerically efficient method of solving the full-order pseudo-2-dimensional (P2D) Li-ion cell model. <i>Journal of Power Sources</i> , 2021, 490, 229571.	4.0	42
1057	A diffusiophoretic mechanism for ATP-driven transport without motor proteins. <i>Nature Physics</i> , 2021, 17, 850-858.	6.5	53

#	ARTICLE	IF	CITATIONS
1058	On multicomponent gas diffusion and coupling concepts for porous media and free flow: a benchmark study. Computational Geosciences, 2021, 25, 1493-1507.	1.2	12
1059	Fick diffusion coefficients via molecular dynamics: An alternative approach in the Fourier domain. Journal of Molecular Liquids, 2021, 329, 115460.	2.3	4
1060	How sensitive are physical properties of choline chloride-urea mixtures to composition changes: Molecular dynamics simulations and Kirkwood-Buff theory. Journal of Chemical Physics, 2021, 154, 184502.	1.2	24
1061	Analysis of Corona Initiation Characteristics of Suspended Conductor. , 2021, , .		1
1062	Bifunctional Co-based Catalysts for Fischer-Tropsch Synthesis: Descriptors Affecting the Product Distribution. ChemCatChem, 2021, 13, 2726-2742.	1.8	10
1063	Modeling of Hydrogen Permeation through Pd Membrane on Ceramic Supports Activated via Pd Nanoparticles-TiO <sub>2</sub> -Bohemite Suspension. Theoretical Foundations of Chemical Engineering, 2021, 55, 504-517.	0.2	0
1064	Diffusion coefficients of CO <sub>2</sub> -SO <sub>2</sub> -water and CO <sub>2</sub> -N <sub>2</sub> -water systems and their impact on the CO <sub>2</sub> sequestration process: Molecular dynamics and dissolution process simulations. , 2021, 11, 764-779.		10
1065	Modeling and simulation for design and analysis of membrane-based separation processes. Computers and Chemical Engineering, 2021, 148, 107258.	2.0	36
1066	A universal transportation model for reverse osmosis systems. Computers and Chemical Engineering, 2021, 148, 107264.	2.0	6
1067	Recent Advances of Pervaporation Separation in DMF/H <sub>2</sub> O Solutions: A Review. Membranes, 2021, 11, 455.	1.4	13
1068	Downhill and uphill diffusion of gases with temperature inversions in the atmosphere. Indian Journal of Physics, 0, , 1.	0.9	0
1069	Numerical Simulations of Gas Sorption Experiments in Polymers: Influence of Aspect Ratio and Pressure Increase Rate on the Determination of Diffusion Coefficient. Macromolecular Theory and Simulations, 2021, 30, 2100016.	0.6	2
1070	Optimal design of hierarchically structured ZSM-5 zeolites for n-hexane isomerization. AIChE Journal, 2021, 67, e17355.	1.8	7
1071	Thermo-electrochemical modelling of high temperature methanol-fuelled solid oxide fuel cells. Applied Energy, 2021, 291, 116832.	5.1	39
1072	Weathering of unsaturated waste rocks from Kevitsa and Hitura mines: Pilot-scale lysimeter experiments and reactive transport modeling. Applied Geochemistry, 2021, 130, 104984.	1.4	14
1073	A time-dependent chloride diffusion model for predicting initial corrosion time of reinforced concrete with slag addition. Cement and Concrete Research, 2021, 145, 106455.	4.6	46
1074	Modelling of multiple gas transport mechanisms through coal particle considering thermal effects. Fuel, 2021, 295, 120587.	3.4	8
1075	Prediction of de-NO <sub>x</sub> performance using monolithic SCR catalyst under load following operation of natural gas-fired combined cycle power plants. Energy, 2021, 227, 120383.	4.5	14

#	ARTICLE	IF	CITATIONS
1076	Enhanced In Situ Separation of Boron at the Silicon Alloy Solidification Interface through Innovating the Impurity Chemical Reconstruction Approach for SoG-Si. ACS Sustainable Chemistry and Engineering, 2021, 9, 11179-11193.	3.2	4
1077	An approach combining the lattice Boltzmann method and Maxwell's Stefan equation for modeling multi-component diffusion. Physics of Fluids, 2021, 33, .	1.6	4
1078	Selectivity enhancement by the presence of grain boundary in chabazite zeolite membranes investigated by non-equilibrium molecular dynamics. Journal of Membrane Science, 2021, 632, 119348.	4.1	7
1079	Effective transport parameters of porous media from 2D microstructure images. International Journal of Heat and Mass Transfer, 2021, 175, 121371.	2.5	4
1080	Transport Model for Gas and Water in Nanopores of Shale Gas Reservoirs. Journal of Energy Engineering - ASCE, 2021, 147, .	1.0	6
1081	Performance-Based Screening of Porous Materials for Carbon Capture. Chemical Reviews, 2021, 121, 10666-10741.	23.0	115
1082	Modelling charge transport in perovskite solar cells: Potential-based and limiting ion depletion. Electrochimica Acta, 2021, 390, 138696.	2.6	11
1083	Interaction-based ion selectivity exhibited by self-assembled, cross-linked zwitterionic copolymer membranes. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	20
1084	Single-phase fluid mass transfer in petroleum processing and petrochemical technology: Theory and application. Asia-Pacific Journal of Chemical Engineering, 2022, 17, e2709.	0.8	1
1085	Mechanism of improved electrochemical performance of anode-supported solid oxide fuel cells by mesostructural modification of electrode-electrolyte interface. Journal of Power Sources, 2021, 506, 230107.	4.0	12
1086	Zeolite-like performance for xylene isomer purification using polymer-derived carbon membranes. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	14
1087	Fine three-dimensional simulation of the heterogeneous anode of a solid oxide fuel cell with direct internal reforming. Chemical Engineering Science, 2021, 242, 116747.	1.9	11
1088	Evaluating gas permeance through graphene nanopores and porous 2D-membranes: A generalized approach. Carbon Trends, 2021, 5, 100086.	1.4	2
1089	Framework for predicting the fractionation of complex liquid feeds via polymer membranes. Journal of Membrane Science, 2021, 640, 119767.	4.1	21
1090	Analysis of mass diffusion theory and models for high-temperature multi-component gases. International Journal of Heat and Mass Transfer, 2021, 181, 121994.	2.5	5
1091	Catalytic distillation. , 2022, , 191-240.		1
1092	Experimental verification of kinetics and internal diffusion impact on low temperature steam reforming of a propane-methane mixture over Ni-based catalyst. Chemical Engineering Journal, 2022, 429, 132205.	6.6	8
1093	Mathematical approaches to modelling the mass transfer process in solid oxide fuel cell anode. Energy, 2022, 239, 121878.	4.5	16

#	ARTICLE	IF	CITATIONS
1094	Extractive distillation. , 2022, , 65-154.		0
1095	Thermodynamic fundamentals. , 2022, , 1-63.		0
1096	Modeling of low-temperature reduction of metal oxide in hydrogen treatment system for severe accidents in nuclear power plants. Mechanical Engineering Journal, 2021, 8, 21-00005-21-00005.	0.2	0
1097	An Energy Stable and Positivity-Preserving Scheme for the Maxwell–Stefan Diffusion System. SIAM Journal on Numerical Analysis, 2021, 59, 2321-2345.	1.1	4
1098	Water Saturation Relations and Their Diffusion–Limited Equilibration in Gas Shale: Implications for Gas Flow in Unconventional Reservoirs. Water Resources Research, 2017, 53, 9757-9770.	1.7	41
1099	Reactive gas adsorption. , 2006, , 149-190.		2
1100	Coupled Proton and Water Transport in Polymer Electrolyte Membranes. Topics in Applied Physics, 2009, , 123-155.	0.4	4
1101	On the Maxwell-Stefan Approach to Multicomponent Diffusion. Progress in Nonlinear Differential Equations and Their Application, 2011, , 81-93.	0.4	55
1102	Finite Volume Method. , 2018, , 385-395.		2
1103	Sensitivity Analysis of Multicomponent Mass Transport in Porous Solids Described by Partial Differential Equations. , 1999, , 152-159.		1
1104	Dynamic Validation of Model for Post-Combustion Chemical Absorption CO <sub>2</sub> Capture Plant. Computer Aided Chemical Engineering, 2012, , 807-811.	0.3	5
1105	Transfer Phenomena in Chromatography. , 2006, , 221-279.		1
1106	Catalytic distillation. , 2005, , 178-221.		10
1107	Topology optimization as a powerful tool to design advanced PEMFCs flow fields. International Journal of Heat and Mass Transfer, 2019, 135, 72-92.	2.5	57
1109	Consistent lattice Boltzmann model for multicomponent mixtures. Journal of Fluid Mechanics, 2021, 909, .	1.4	15
1110	Membranes for Solar Fuels Devices. RSC Energy and Environment Series, 2018, , 341-385.	0.2	6
1111	Using molecular dynamics to obtain Maxwell-Stefan diffusion coefficients in liquid systems. Molecular Physics, 1998, 94, 495-503.	0.8	33
1113	Analytical Expression for Concentration Overpotential of Anode-Supported Solid Oxide Fuel Cell Based on the Dusty Gas Model. Journal of Electrochemical Energy Conversion and Storage, 2020, 17, .	1.1	6

#	ARTICLE	IF	CITATIONS
1114	Kinetics of Polyelectrolyte Gels. Journal of Applied Mechanics, Transactions ASME, 2020, 87, .	1.1	20
1115	Experimental and Numerical Study on the Cold Start Performance of a Single PEM Fuel Cell. Advances in Mechanical Engineering, 2010, 2, 403816.	0.8	4
1116	A Methodology to Estimate Transport Diffusivities in 'Single-File' Permeation through Zeolite Membranes Using Molecular Simulations. Journal of Chemical Engineering of Japan, 2007, 40, 1045-1055.	0.3	9
1117	A Study of Permeation of n-Butane through ZSM-5 Membrane by Using Monte Carlo and Equilibrium/Non-Equilibrium Molecular Dynamics Simulations.. Journal of Chemical Engineering of Japan, 2003, 36, 313-321.	0.3	9
1119	Multicomponent Diffusion Modeling of Cyclic Solvent Injection in Ultratight Reservoirs. SPE Journal, 2021, 26, 1213-1232.	1.7	24
1121	Applicability of linearized Dusty Gas Model for multicomponent diffusion of gas mixtures in porous solids. Acta Periodica Technologica, 2007, , 75-84.	0.5	2
1122	A unified apparent porosity/permeability model of organic porous media: Coupling complex pore structure and multi-migration mechanism. Advances in Geo-Energy Research, 2020, 4, 115-125.	3.1	48
1124	A mathematical and numerical analysis of the Maxwell-Stefan diffusion equations. Discrete and Continuous Dynamical Systems - Series B, 2012, 17, 1427-1440.	0.5	47
1125	Modeling and analysis of reactive multi-component two-phase flows with mass transfer and phase transition the isothermal incompressible case. Discrete and Continuous Dynamical Systems - Series S, 2017, 10, 673-696.	0.6	4
1126	On a kinetic BGK model for slow chemical reactions. Kinetic and Related Models, 2011, 4, 153-167.	0.5	7
1127	Diffusion asymptotics of a kinetic model for gaseous mixtures. Kinetic and Related Models, 2013, 6, 137-157.	0.5	37
1129	From the simple reacting sphere kinetic model to the reaction-diffusion system of Maxwellâ€“Stefan type. Communications in Mathematical Sciences, 2019, 17, 507-538.	0.5	4
1131	Modeling the impedance response and steady state behaviour of porous CGO-based MIEC anodes. Physical Chemistry Chemical Physics, 2021, 23, 23042-23074.	1.3	6
1132	Modeling Issues in Zeolite Applications. , 2003, , 1419-1464.		0
1133	Modeling Issues in Zeolite Applications. , 2003, , .		0
1134	Catalytic Distillation Technology Applied to Ether Production. Chemical Industries, 2004, , .	0.1	0
1135	Kinetic Models and Multicomponent Problems. , 2006, , 735-777.		0
1136	Chapter 14. Applied Non-Equilibrium Thermodynamics. , 2010, , 460-498.		0



#	ARTICLE	IF	CITATIONS
1137	Basic Models of Computational Mass Transfer. Heat and Mass Transfer, 2014, , 29-84.	0.2	2
1139	Modelling of Mixed Matrix Membranes Using a Resistance Based Model. , 0, , .		0
1140	Hydromechanics: Poroelasticity as a Simple Case. , 2018, , 219-235.		0
1141	Characterization and modeling of the polarization phenomenon to describe salt rejection by nanofiltration. 4open, 2018, 1, 5.	0.1	1
1143	Concentrato: Transport of Dispersed Mass. , 2018, , 123-138.		0
1144	A Review on the Mathematical Models about the Mass Transfer Mechanism in Static and Kinetic Adsorption Processes. Hans Journal of Chemical Engineering and Technology, 2019, 09, 288-297.	0.0	0
1145	Separation of Butanol Using Pervaporation: A Review of Mass Transfer Models. Journal of Fluid Flow, Heat and Mass Transfer, 0, , .	0.0	1
1146	Evaluation of Multi-Gas Transport Behavior in Shales Through a Universal Model. , 2019, , .		1
1147	Fundamentals of electrochemistry. , 2020, , 75-99.		1
1148	Determination of effective binary diffusivity in anode of solid oxide fuel cell based on Fick's law. Mechanical Engineering Journal, 2020, 7, 20-00239-20-00239.	0.2	0
1149	Mixed-Gas Selectivity Based on Pure Gas Permeation Measurements: An Approximate Model. Membranes, 2021, 11, 833.	1.4	4
1150	Interaction of Intrinsic Kinetics, Catalyst Durability and Internal Mass Transfer in the Oxidation of Sugar Mixtures on Gold Nanoparticle Extrudates. Industrial & Engineering Chemistry Research, 2021, 60, 6483-6500.	1.8	3
1151	Optimal sequencing and adsorbent design of multi-bed adsorption chillers. Applied Thermal Engineering, 2022, 200, 117689.	3.0	4
1152	Generalized Diffusion-Relaxation Model for Solvent Sorption in Polymers. Industrial & Engineering Chemistry Research, 2021, 60, 15766-15781.	1.8	16
1153	Modern perspectives on near-equilibrium analysis of Turing systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200268.	1.6	34
1154	Elementary Kinetic Theory of Gases. , 2009, , 187-331.		1
1156	Enhanced gas recovery technologies aimed at exploiting captured carbon dioxide. , 2022, , 305-347.		6
1157	Effects of coal-fired flue gas composition on condensational growth by water vapor for fine SiO <sub>2</sub> particles. Chemical Engineering Research and Design, 2022, 158, 34-41.	2.7	3

#	ARTICLE	IF	CITATIONS
1158	Pattern formation revisited within nonequilibrium thermodynamics: Burgers's-type equation. <i>Biological Cybernetics</i> , 2022, 116, 81-91.	0.6	2
1159	Numerical validation of the dusty-gas model for binary diffusion in low aspect ratio capillaries. <i>Physics of Fluids</i> , 2021, 33, .	1.6	4
1162	A coupled electro-chemo-mechanical theory for polyelectrolyte gels with application to modeling their chemical stimuli-driven swelling response. <i>Journal of the Mechanics and Physics of Solids</i> , 2022, 159, 104734.	2.3	10
1164	A Review on the Application of Molecular Dynamics to the Study of Coalbed Methane Geology. <i>Frontiers in Earth Science</i> , 2021, 9, .	0.8	6
1165	Perturbative Cauchy theory for a flux-incompressible Maxwell-Stefan system. <i>Discrete and Continuous Dynamical Systems</i> , 2022, .	0.5	1
1166	In Silico Prediction of Food Properties: A Multiscale Perspective. <i>Frontiers in Chemical Engineering</i> , 2022, 3, .	1.3	4
1167	Mixed matrix membranes for gas separation. , 2022, , 203-254.		0
1168	Topology optimization of the catalyst distribution of planar methane steam reformers. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 8314-8326.	3.8	2
1169	Transport phenomena in fixed and fluidized-bed inorganic membrane reactors. , 2022, , 247-280.		0
1170	A kinetic model of a polyelectrolyte gel undergoing phase separation. <i>Journal of the Mechanics and Physics of Solids</i> , 2022, 160, 104771.	2.3	10
1171	Coupled Transport Effects in Solid Oxide Fuel Cell Modeling. <i>Entropy</i> , 2022, 24, 224.	1.1	5
1172	A condensation heat transfer model with light gas effects in non-condensable gas mixtures. <i>International Communications in Heat and Mass Transfer</i> , 2022, 130, 105765.	2.9	8
1173	Membranes for blue energy conversion by reverse electrodialysis (RED). , 2022, , 91-137.		0
1174	Hypocoercivity for perturbation theory and perturbation of hypocoercivity for confined Boltzmann-type collisional equations. <i>SeMA Journal</i> , 0, , 1.	1.0	0
1175	Maximum entropy principle approach to a non-isothermal Maxwell-Stefan diffusion model. <i>Applied Mathematics Letters</i> , 2022, 129, 107949.	1.5	3
1176	Use of Boundary-Driven Nonequilibrium Molecular Dynamics for Determining Transport Diffusivities of Multicomponent Mixtures in Nanoporous Materials. <i>Journal of Physical Chemistry B</i> , 2022, 126, 1085-1100.	1.2	4
1177	Theoretical approaches in hot CO <sub>2</sub> capture using modified CaO-based sorbents: Review. <i>Journal of CO<sub>2</sub> Utilization</i> , 2022, 57, 101875.	3.3	8
1178	A Robust Physics-Based Calculation of Evolving Gas-Liquid Interfaces. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2022, .	2.4	1

#	ARTICLE	IF	CITATIONS
1179	Mass Diffusion and Thermodiffusion in Multicomponent Fluid Mixtures. <i>International Journal of Thermophysics</i> , 2022, 43, 1.	1.0	1
1180	Machine Learning-Enabled Prediction and High-Throughput Screening of Polymer Membranes for Pervaporation Separation. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 8427-8436.	4.0	22
1181	Evaluation of the application of different diffusion models for the methanation of CO/CO <sub>2</sub> mixtures. <i>Results in Engineering</i> , 2022, 13, 100355.	2.2	2
1182	Matching Analysis of Mixed Matrix Membranes for Organic Solvent Reverse Osmosis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 3395-3411.	1.8	5
1183	Measuring and Modeling Water Sorption in Amorphous Indomethacin and Ritonavir. <i>Molecular Pharmaceutics</i> , 2022, 19, 998-1007.	2.3	3
1184	Narrow Pressure Stability Window of Gas Diffusion Electrodes Limits the Scale-Up of CO <sub>2</sub> Electrolyzers. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 4683-4693.	3.2	29
1185	A Comparison between Klinkenberg and Maxwell-Stefan Formulations to Model Tight Condensate Formations. <i>SPE Journal</i> , 2022, 27, 2015-2032.	1.7	3
1186	Calculation of Virial Coefficients, Joule-Thomson Inversion Curve and Mutual Diffusion for Binary Mixtures. <i>Russian Journal of Physical Chemistry A</i> , 2022, 96, 502-507.	0.1	0
1187	Modeling Diffusive Mixing in Antisolvent Crystallization. <i>Crystal Growth and Design</i> , 2022, 22, 2192-2207.	1.4	1
1188	Challenges in predicting the reactivity of mine waste rocks based on kinetic testing: Humidity cell tests and reactive transport modeling. <i>Journal of Geochemical Exploration</i> , 2022, 237, 106996.	1.5	6
1189	Design and optimization of functionally graded electrodes for solid oxide fuel cells (SOFCs) by mesoscale modeling. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 16610-16625.	3.8	12
1190	The development of a process simulator transport model for RO systems. <i>Computers and Chemical Engineering</i> , 2022, 161, 107783.	2.0	0
1191	Study on the two-component gas apparent permeability model in shale nanopores considering Knudsen number correction. <i>Journal of Petroleum Science and Engineering</i> , 2022, 213, 110405.	2.1	2
1192	A single-phase diffusion model for gas injection in tight oil reservoirs. <i>Journal of Petroleum Science and Engineering</i> , 2022, 213, 110469.	2.1	4
1193	Modeling and experimental study on methane diffusivity in coal mass under in-situ high stress conditions: A better understanding of gas extraction. <i>Fuel</i> , 2022, 321, 124078.	3.4	21
1194	Image-based modelling of coke combustion in a multiscale porous medium using a micro-continuum framework. <i>Journal of Fluid Mechanics</i> , 2022, 932, .	1.4	6
1195	A novel multi-physics coupled heterogeneous single-cell numerical model for solid oxide fuel cell based on 3D microstructure reconstructions. <i>Energy and Environmental Science</i> , 2022, 15, 2410-2424.	15.6	17
1196	Lagrangian approach of structure formation in Newtonian cosmologies with two fluids. <i>International Journal of Modern Physics D</i> , 0, , .	0.9	0

#	ARTICLE	IF	CITATIONS
1197	Water Sorption in Glassy Polyvinylpyrrolidone-Based Polymers. <i>Membranes</i> , 2022, 12, 434.	1.4	11
1199	Adsorption and Diffusion in Porous Systems. , 0, , 295-320.		0
1200	Hybrid numerical simulation of the generation and distribution characteristics of SF <sub>6</sub> heavy particles under different DC PD energies. <i>AIP Advances</i> , 2022, 12, 045226.	0.6	0
1201	Engineering Pore Network Structure of Binders for Improved Catalytic Performance of Zeolite Pellets Using a Multiscale Model. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 6354-6366.	1.8	2
1202	H <sub>2</sub> permeation and its influence on gases through a SAPO-34 zeolite membrane. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 12036-12044.	3.8	2
1203	Multiscale modeling of gas flow behaviors in nanoporous shale matrix considering multiple transport mechanisms. <i>Physical Review E</i> , 2022, 105, .	0.8	10
1204	Particle-Scale Heat and Mass Transfer Processes in Lignite Pyrolysis with Solid Heat Carrier. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1205	Multicomponent Leakage and Diffusion Simulation of Natural Gas/Hydrogen Mixtures in Compressor Plants. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1206	Co-Electrolysis of H <sub>2</sub> O and CO <sub>2</sub> Utilizing Solar-Driven High-Temperature Electrolysis with Ammonia-Based Chemical Heat Pump. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1207	Numerical model for static chamber measurement of multi-component landfill gas emissions and its application. <i>Environmental Science and Pollution Research</i> , 2022, 29, 74225-74241.	2.7	5
1208	Coarse-Grained Modeling of Ion-Containing Polymers. <i>Chemical Reviews</i> , 2022, 122, 10710-10745.	23.0	7
1209	Probing deactivation by coking in catalyst pellets for dry reforming of methane using a pore network model. <i>Chinese Journal of Chemical Engineering</i> , 2023, 55, 293-303.	1.7	2
1210	Toward Bottom-Up Understanding of Transport in Concentrated Battery Electrolytes. <i>ACS Central Science</i> , 2022, 8, 880-890.	5.3	14
1211	Single-gas and mixed-gas permeation of N <sub>2</sub> /CH <sub>4</sub> in thermally-rearranged TR-PBO membranes and their 6FDA-bisAPAF polyimide precursor studied by molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 18667-18683.	1.3	4
1212	Modelling and experimental studies on mass transport of multiple cryoprotective agents in articular cartilage. <i>Cryobiology</i> , 2022, , .	0.3	0
1214	Temperature Gradient Analyses of a Tubular Solid Oxide Fuel Cell Fueled by Methanol. <i>Transactions of Tianjin University</i> , 2023, 29, 14-30.	3.3	8
1215	Significant Effect of Rugosity on Transport of Hydrocarbon Liquids in Carbonaceous Nanopores. <i>Energy &amp; Fuels</i> , 2022, 36, 10026-10042.	2.5	2
1216	Integrated solar-driven high-temperature electrolysis operating with concentrated irradiation. <i>Joule</i> , 2022, 6, 2102-2121.	11.7	19

#	ARTICLE	IF	CITATIONS
1217	Recent advances on the modeling and optimization of CO <sub>2</sub> capture processes. <i>Computers and Chemical Engineering</i> , 2022, 165, 107938.	2.0	9
1218	Study on mass transfer in reactive liquid-liquid systems. <i>Chemical Engineering Research and Design</i> , 2022, 186, 541-555.	2.7	2
1219	Apparent diffusion coefficient for adsorption-controlled gas transport in nanoporous media. <i>Chemical Engineering Journal</i> , 2022, 450, 138105.	6.6	10
1220	A multiscale thermodynamic generalization of Maxwell-Stefan diffusion equations and of the dusty gas model. <i>International Journal of Heat and Mass Transfer</i> , 2022, 199, 123405.	2.5	0
1221	Transport properties of mixtures of acid gases with aqueous monoethanolamine solutions: A molecular dynamics study. <i>Fluid Phase Equilibria</i> , 2023, 564, 113587.	1.4	4
1222	Multicomponent leakage and diffusion simulation of natural gas/hydrogen mixtures in compressor plants. <i>Safety Science</i> , 2023, 157, 105916.	2.6	11
1223	Heat and mass transport phenomena in autothermal microchannel reformers. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1224	Modelling Sorption and Transport of Gases in Polymeric Membranes across Different Scales: A Review. <i>Membranes</i> , 2022, 12, 857.	1.4	13
1225	Study on Apparent Permeability Model for Gas Transport in Shale Inorganic Nanopores. <i>Energies</i> , 2022, 15, 6301.	1.6	1
1226	Diffusion-Based Multiphase Multicomponent Modeling of Cyclic Solvent Injection in Ultratight Reservoirs. , 2022, , .		3
1227	Diffusivities of linear unsaturated ketones and aldehydes in compressed liquid ethanol. <i>Journal of Molecular Liquids</i> , 2022, 367, 120480.	2.3	2
1228	Theoretical and Experimental Considerations for Investigating Multicomponent Diffusion in Hydrated, Dense Polymer Membranes. <i>Membranes</i> , 2022, 12, 942.	1.4	2
1229	Gas Transport Modeling in Organic-Rich Nanoporous Media with Nonequilibrium Sorption Kinetics. , 2022, , .		0
1230	The Steady State Characteristics of Multicomponent Diffusion in Micro- and Mesoporous Media for Adsorbable and Nonadsorbable Species. <i>Membranes</i> , 2022, 12, 921.	1.4	1
1231	Kirkwood's Buff integrals: From fluctuations in finite volumes to the thermodynamic limit. <i>Journal of Chemical Physics</i> , 2022, 157, .	1.2	9
1232	Particle-scale heat and mass transfer processes during the pyrolysis of millimeter-sized lignite particles with solid heat carriers. <i>Applied Thermal Engineering</i> , 2023, 219, 119372.	3.0	7
1233	Analyzing transport in ceramic membranes for organic solvent nanofiltration using Maxwell-Stefan theory. <i>Chemical Engineering Science</i> , 2022, 264, 118133.	1.9	3
1234	Application of the Maxwell's Stefan theory in modeling gas diffusion experiments into isolated oil droplets by water. <i>Physics of Fluids</i> , 2022, 34, .	1.6	3

#	ARTICLE	IF	CITATIONS
1235	Multicomponent mutual diffusion in the warm, dense matter regime. <i>Physics of Plasmas</i> , 2022, 29, 112703.	0.7	0
1236	Moisture Retention and Multi-mechanistic Transport Behavior in Nanoporous Coal. <i>Langmuir</i> , 2022, 38, 14941-14958.	1.6	2
1237	Water based adsorption thermal battery: Sorption mechanisms and applications. <i>Energy Storage Materials</i> , 2023, 54, 794-821.	9.5	13
1238	Models for the Interplay of Mechanics, Electrochemistry, Thermodynamics, and Kinetics in Lithium-Ion Batteries. <i>Applied Mechanics Reviews</i> , 2023, 75, .	4.5	5
1239	Toward a universal framework for evaluating transport resistances and driving forces in membrane-based desalination processes. <i>Science Advances</i> , 2023, 9, .	4.7	16
1240	Interfacial Tensions, Solubilities, and Transport Properties of the $H_2/H_2O/NaCl$ System: A Molecular Simulation Study. <i>Journal of Chemical &amp; Engineering Data</i> , 2024, 69, 307-319.	1.0	22
1241	Influences of diffusion and advection on dynamic oil-CO <sub>2</sub> mixing during CO <sub>2</sub> EOR and storage process: Experimental study and numerical modeling at pore-scales. <i>Energy</i> , 2023, 267, 126567.	4.5	8
1242	Computational fluid dynamics simulation of forward osmosis (FO) membrane systems: Methodology, state of art, challenges and opportunities. <i>Desalination</i> , 2023, 549, 116359.	4.0	10
1243	Study of syngas-powered fuel cell, simulation, modeling, and optimization. , 2023, , 493-531.		0
1244	Gas transport in organic-rich nanoporous media with nonequilibrium sorption kinetics. <i>Fuel</i> , 2023, 340, 127520.	3.4	2
1245	A comprehensive pyrolysis model for lignocellulosic biomass particles with a special emphasis on the anisotropic characteristics. <i>Fuel</i> , 2023, 341, 127635.	3.4	1
1246	Electrochemo-poromechanics of Ionic Polymer Metal Composites: Towards the Accurate Finite Element Modelling of Actuation and Sensing. <i>Journal of Elasticity</i> , 2023, 153, 299-358.	0.9	2
1247	On the measurement of the mutual diffusivity of binary gas mixtures with FTIR Spectroscopy. <i>Chemical Engineering Science</i> , 2023, 270, 118546.	1.9	1
1248	Permeation of individual cryoprotectants and their different combinations into mouse liver tissue. <i>Cryobiology</i> , 2023, 111, 26-29.	0.3	0
1249	Direct evaluation of void effect on gas permeation in mixed matrix membrane by non-equilibrium molecular dynamics. <i>Journal of Membrane Science</i> , 2023, 677, 121594.	4.1	2
1250	Computational fluid dynamics simulations of membrane gas separation: Overview, challenges and future perspectives. <i>Chemical Engineering Research and Design</i> , 2023, 191, 127-140.	2.7	12
1251	On the structure of continuum thermodynamical diffusion fluxes—A novel closure scheme and its relation to the Maxwell–Stefan and the Fick–Onsager approach. <i>International Journal of Engineering Science</i> , 2023, 184, 103818.	2.7	5
1252	Water Sorption in Rubbery and Glassy Polymers, Nifedipine, and Their ASDs. <i>Molecular Pharmaceutics</i> , 2023, 20, 2194-2206.	2.3	4

#	ARTICLE	IF	CITATIONS
1254	The evaluation of density and diffusion properties in hydrogen/oxygen mixture modelled by Lennard-Jones fluid. <i>Molecular Physics</i> , 0, , .	0.8	0
1255	A mechanistic model for salt and water transport in leaky membranes: Implications for low-salt-rejection reverse osmosis membranes. <i>Journal of Membrane Science</i> , 2023, 678, 121642.	4.1	3
1257	Nature-Inspired Optimization of Transport in Porous Media. , 2023, , 215-245.		0
1266	Molecular modelling of the thermophysical properties of fluids: expectations, limitations, gaps and opportunities. <i>Physical Chemistry Chemical Physics</i> , 2023, 25, 12607-12628.	1.3	5
1278	Fluid dynamics aspects and reactor scale simulations of chemical reactors for turquoise hydrogen production. <i>Advances in Chemical Engineering</i> , 2023, , 63-132.	0.5	0
1281	Calculation of Multicomponent Gas-Gas and Gas-Liquid Diffusion Coefficient in Porous Media. <i>Springer Series in Geomechanics and Geoengineering</i> , 2023, , 5035-5048.	0.0	0
1297	Fundamental of ion-exchange membranes. , 2024, , 1-19.		0
1303	NH <sub>3</sub> decomposition in autothermal microchannel reactors. , 2024, , 155-191.		0