

# Mark B Shiflett

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6670882/publications.pdf>

Version: 2024-02-01

102  
papers

6,307  
citations

71102

41  
h-index

66911

78  
g-index

103  
all docs

103  
docs citations

103  
times ranked

3198  
citing authors

#	ARTICLE	IF	CITATIONS
1	Solubilities and Diffusivities of Carbon Dioxide in Ionic Liquids: [bmim][PF <sub>6</sub> ] and [bmim][BF <sub>4</sub> ]. Industrial & Engineering Chemistry Research, 2005, 44, 4453-4464.	3.7	560
2	Physical and Chemical Absorptions of Carbon Dioxide in Room-Temperature Ionic Liquids. Journal of Physical Chemistry B, 2008, 112, 16654-16663.	2.6	396
3	Solubility and diffusivity of hydrofluorocarbons in room-temperature ionic liquids. AIChE Journal, 2006, 52, 1205-1219.	3.6	286
4	Carbon Dioxide Capture Using Ionic Liquid 1-Butyl-3-methylimidazolium Acetate. Energy & Fuels, 2010, 24, 5781-5789.	5.1	275
5	Phase Behavior of Carbon Dioxide in Ionic Liquids: [emim][Acetate], [emim][Trifluoroacetate], and [emim][Acetate] + [emim][Trifluoroacetate] Mixtures. Journal of Chemical & Engineering Data, 2009, 54, 108-114.	1.9	267
6	Solubility of CO <sub>2</sub> in Room Temperature Ionic Liquid [hmim][Tf <sub>2</sub> N]. Journal of Physical Chemistry B, 2007, 111, 2070-2074.	2.6	247
7	Phase behavior of {carbon dioxide+[bmim][Ac]} mixtures. Journal of Chemical Thermodynamics, 2008, 40, 25-31.	2.0	244
8	Vapor-liquid equilibria of ammonia+ionic liquid mixtures. Applied Energy, 2007, 84, 1258-1273.	10.1	225
9	Ammonia Solubilities in Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2007, 46, 1605-1610.	3.7	215
10	Solubility and Diffusivity of Difluoromethane in Room-Temperature Ionic Liquids. Journal of Chemical & Engineering Data, 2006, 51, 483-495.	1.9	189
11	Water Solubility in Ionic Liquids and Application to Absorption Cycles. Industrial & Engineering Chemistry Research, 2010, 49, 9496-9503.	3.7	145
12	Chemical Absorption of Sulfur Dioxide in Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2010, 49, 1370-1377.	3.7	145
13	Solubility and diffusivity of 1,1,1,2-tetrafluoroethane in room-temperature ionic liquids. Fluid Phase Equilibria, 2006, 242, 220-232.	2.5	140
14	Separation of Carbon Dioxide and Sulfur Dioxide Gases Using Room-Temperature Ionic Liquid [hmim][Tf <sub>2</sub> N]. Energy & Fuels, 2009, 23, 4701-4708.	5.1	136
15	Thermal effect on C-H stretching vibrations of the imidazolium ring in ionic liquids. Physical Chemistry Chemical Physics, 2007, 9, 5018.	2.8	132
16	Separation of CO <sub>2</sub> and H <sub>2</sub> S using room-temperature ionic liquid [bmim][PF <sub>6</sub> ]. Fluid Phase Equilibria, 2010, 294, 105-113.	2.5	118
17	Hydrogen purification using room-temperature ionic liquids. Applied Energy, 2007, 84, 351-361.	10.1	112
18	Separation of Carbon Dioxide and Sulfur Dioxide Using Room-Temperature Ionic Liquid [bmim][MeSO <sub>4</sub> ]. Energy & Fuels, 2010, 24, 1001-1008.	5.1	108

#	ARTICLE	IF	CITATIONS
19	Separation of CO <sub>2</sub> and H <sub>2</sub> S Using Room-Temperature Ionic Liquid [bmim][MeSO <sub>4</sub> ]. Journal of Chemical & Engineering Data, 2010, 55, 4785-4793.	1.9	104
20	Global phase behaviors of trifluoromethane in ionic liquid [bmim][PF <sub>6</sub> ]. AIChE Journal, 2006, 52, 3952-3957.	3.6	102
21	On the preparation of supported nanoporous carbon membranes. Journal of Membrane Science, 2000, 179, 275-282.	8.2	95
22	Metal Recovery Using Oxalate Chemistry: A Technical Review. Industrial & Engineering Chemistry Research, 2019, 58, 15381-15393.	3.7	93
23	Vapor-Liquid-Liquid Equilibria of Hydrofluorocarbons + 1-Butyl-3-methylimidazolium Hexafluorophosphate. Journal of Chemical & Engineering Data, 2006, 51, 1931-1939.	1.9	88
24	Solubility Differences of Halocarbon Isomers in Ionic Liquid [emim][Tf <sub>2</sub> N]. Journal of Chemical & Engineering Data, 2007, 52, 2007-2015.	1.9	82
25	Gaseous Absorption of Fluoromethane, Fluoroethane, and 1,1,2,2-Tetrafluoroethane in 1-Butyl-3-Methylimidazolium Hexafluorophosphate. Industrial & Engineering Chemistry Research, 2006, 45, 6375-6382.	3.7	81
26	Vapor-Liquid-Liquid Equilibria of Pentafluoroethane and Ionic Liquid [bmim][PF <sub>6</sub> ] Mixtures Studied with the Volumetric Method. Journal of Physical Chemistry B, 2006, 110, 14436-14443.	2.6	79
27	Binary Vapor-Liquid and Vapor-Liquid-Liquid Equilibria of Hydrofluorocarbons (HFC-125 and) Tj ETQq1 1 0.784314 rgBT / Over Journal of Chemical & Engineering Data, 2008, 53, 492-497.	1.9	79
28	Gas solubilities in ionic liquids using a generic van der Waals equation of state. Journal of Supercritical Fluids, 2010, 55, 846-851.	3.2	68
29	Phase Behavior of CO <sub>2</sub> in Room-Temperature Ionic Liquid 1-Ethyl-3-Ethylimidazolium Acetate. ChemPhysChem, 2012, 13, 1806-1817.	2.1	68
30	The solubility of gases in ionic liquids. AIChE Journal, 2017, 63, 4722-4737.	3.6	64
31	Solubility of Tetrafluoromethane in the Ionic Liquid [hmim][Tf <sub>2</sub> N]. Journal of Physical Chemistry B, 2008, 112, 3040-3047.	2.6	63
32	Creating Nanoparticle Stability in Ionic Liquid [C <sub>4</sub> mim][BF <sub>4</sub> ] by Inducing Solvation Layering. ACS Nano, 2015, 9, 3243-3253.	14.6	62
33	Separation of N <sub>2</sub> O and CO <sub>2</sub> Using Room-Temperature Ionic Liquid [bmim][BF <sub>4</sub> ]. Journal of Physical Chemistry B, 2011, 115, 3478-3487.	2.6	56
34	Separation of Lithium and Cobalt from LiCoO <sub>2</sub> : A Unique Critical Metals Recovery Process Utilizing Oxalate Chemistry. ACS Sustainable Chemistry and Engineering, 2020, 8, 6100-6108.	6.7	53
35	Phase Behavior of N <sub>2</sub> O and CO <sub>2</sub> in Room-Temperature Ionic Liquids [bmim][Tf <sub>2</sub> N], [bmim][BF <sub>4</sub> ], [bmim][N(CN) <sub>2</sub> ], [bmim][Ac], [eam][NO <sub>3</sub> ], and [bmim][SCN]. International Journal of Thermophysics, 2012, 33, 412-436.	2.1	50
36	Liquid-Liquid Equilibria in Binary Mixtures of 1,3-Propanediol + Ionic Liquids [bmim][PF <sub>6</sub> ], [bmim][BF <sub>4</sub> ], and [emim][BF <sub>4</sub> ]. Journal of Chemical & Engineering Data, 2007, 52, 1302-1306.	1.9	48

#	ARTICLE	IF	CITATIONS
37	Separation of tetrafluoroethylene and carbon dioxide using ionic liquids. Separation and Purification Technology, 2011, 79, 357-364.	7.9	47
38	A Review of Porous Adsorbents for the Separation of Nitrogen from Natural Gas. Industrial & Engineering Chemistry Research, 2020, 59, 13355-13369.	3.7	46
39	Binary and Ternary Phase Diagrams of Benzene, Hexafluorobenzene, and Ionic Liquid [emim][Tf <sub>2</sub> N] Using Equations of State. Industrial & Engineering Chemistry Research, 2008, 47, 8389-8395.	3.7	43
40	Phase Equilibria, Diffusivities, and Equation of State Modeling of HFC-32 and HFC-125 in Imidazolium-Based Ionic Liquids for the Separation of R-410A. Industrial & Engineering Chemistry Research, 2020, 59, 18222-18235.	3.7	43
41	Liquid-Liquid Equilibria in Binary Mixtures Containing Fluorinated Benzenes and Ionic Liquid 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide. Journal of Chemical & Engineering Data, 2008, 53, 2683-2691.	1.9	42
42	Phase behavior of vinyl fluoride in room-temperature ionic liquids [emim][Tf <sub>2</sub> N], [bmim][N(CN) <sub>2</sub> ], [bmpy][BF <sub>4</sub> ], [bmim][HFPS] and [omim][TFES]. Fluid Phase Equilibria, 2012, 316, 147-155.	2.5	37
43	Liquid-Liquid Equilibria in Binary Mixtures Containing Substituted Benzenes with Ionic Liquid 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide. Journal of Chemical & Engineering Data, 2010, 55, 346-353.	1.9	35
44	Hydrogen substitution effect on the solubility of perhalogenated compounds in ionic liquid [bmim][PF <sub>6</sub> ]. Fluid Phase Equilibria, 2007, 259, 210-217.	2.5	33
45	Separation of N <sub>2</sub> O and CO <sub>2</sub> using Room-Temperature Ionic Liquid [bmim][Ac]. Separation Science and Technology, 2012, 47, 411-421.	2.5	30
46	Process Designs for Separating R-410A, R-404A, and R-407C Using Extractive Distillation and Ionic Liquid Entrainers. Industrial & Engineering Chemistry Research, 2021, 60, 16054-16067.	3.7	30
47	Liquid-Liquid Equilibria of Hydrofluoroethers and Ionic Liquid 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide. Journal of Chemical & Engineering Data, 2007, 52, 2413-2418.	1.9	29
48	Sorption of trifluoromethane in zeolites and ionic liquid. Journal of Chemical Thermodynamics, 2013, 64, 40-49.	2.0	29
49	Review Article: Gas and vapor sorption measurements using electronic beam balances. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	28
50	Review of Isobutane Alkylation Technology Using Ionic Liquid-Based Catalysts—Where Do We Stand?. Industrial & Engineering Chemistry Research, 2020, 59, 15811-15838.	3.7	28
51	Phase Equilibria of Hydrofluorocarbon-4310mee Mixtures with Ionic Liquids: Miscibility of <i>threo</i> - and <i>erythro</i> -Diastereomers in Ionic Liquids. Industrial & Engineering Chemistry Research, 2008, 47, 926-934.	3.7	27
52	Metal Dust Explosion Hazards: A Technical Review. Industrial & Engineering Chemistry Research, 2018, 57, 11473-11482.	3.7	22
53	Phase Equilibria and Diffusivities of HFC-32 and HFC-125 in Ionic Liquids for the Separation of R-410A. ACS Sustainable Chemistry and Engineering, 2022, 10, 816-830.	6.7	22
54	Solubility and Diffusivity of Chlorodifluoromethane in Imidazolium Ionic Liquids: [emim][Tf <sub>2</sub> N], [bmim][BF <sub>4</sub> ], [bmim][PF <sub>6</sub> ], and [emim][TFES]. Industrial & Engineering Chemistry Research, 2019, 58, 11072-11081.	3.7	21

#	ARTICLE	IF	CITATIONS
55	Gas solubility in ionic liquids. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2021, 28, 100425.	5.9	21
56	Lithium and cobalt recovery for lithium-ion battery recycle using an improved oxalate process with hydrogen peroxide. <i>Hydrometallurgy</i> , 2021, 203, 105694.	4.3	20
57	Comparison of the Sorption of Trifluoromethane (R-23) on Zeolites and in an Ionic Liquid. <i>Adsorption Science and Technology</i> , 2013, 31, 59-83.	3.2	19
58	Density, Viscosity, and Vapor Pressure Measurements of Water + Lithium Bis(trifluoromethylsulfonyl)imide Solutions. <i>Journal of Chemical &amp; Engineering Data</i> , 2017, 62, 2056-2066.	1.9	18
59	Liquid-Liquid Equilibria in Binary Mixtures Containing Chlorobenzene, Bromobenzene, and Iodobenzene with Ionic Liquid 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide. <i>Journal of Chemical &amp; Engineering Data</i> , 2009, 54, 2090-2094.	1.9	17
60	Multicomponent Refrigerant Separation Using Extractive Distillation with Ionic Liquids. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 9795-9812.	3.7	17
61	The solubility of CO <sub>2</sub> and N <sub>2</sub> O in olive oil. <i>Fluid Phase Equilibria</i> , 2011, 305, 127-131.	2.5	16
62	Water at the Ionic Liquid-Gas Interface Examined by Ambient Pressure X-ray Photoelectron Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 7337-7343.	3.1	16
63	Ionic Liquids: Current State and Future Directions. <i>ACS Symposium Series</i> , 2017, , 1-13.	0.5	16
64	Viscosity of 1-Alkyl-1-methylpyrrolidinium Bis(trifluoromethylsulfonyl)imide Ionic Liquids Saturated with Compressed CO <sub>2</sub> . <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 4658-4667.	1.9	14
65	Characterization of Thermal Stability and Heat Absorption for Suppressant Agent/Combustible Dust Mixtures via Thermogravimetric Analysis/Differential Scanning Calorimetry. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 4674-4687.	3.7	14
66	Viscosity and Density of a Polyol Ester Lubricating Oil Saturated with Compressed Hydrofluoroolefin Refrigerants. <i>Journal of Chemical &amp; Engineering Data</i> , 2020, 65, 4335-4346.	1.9	14
67	Lithium and Cobalt Recovery from LiCoO <sub>2</sub> Using Oxalate Chemistry: Scale-Up and Techno-Economic Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 5285-5294.	3.7	14
68	Computing the Composition of Ethanol-Water Mixtures Based on Experimental Density and Temperature Measurements. <i>Fermentation</i> , 2018, 4, 72.	3.0	13
69	Water Sorption and Diffusivity in [C <sub>2</sub> C <sub>1</sub> im][BF <sub>4</sub> ], [C <sub>4</sub> C <sub>1</sub> im][OAc], and [C <sub>4</sub> C <sub>1</sub> im][Cl]. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 1743-1753.	3.7	13
70	Difluoromethane (HFC-32) and Pentafluoroethane (HFC-125) Sorption on Linde Type A (LTA) Zeolites for the Separation of Azeotropic Hydrofluorocarbon Refrigerant Mixtures. <i>Langmuir</i> , 2022, 38, 1937-1953.	3.5	13
71	Selective separation of HFC-32 from R-410A using poly(dimethylsiloxane) and a copolymer of perfluoro(butenyl vinyl ether) and perfluoro(2,2-dimethyl-1,3-dioxole). <i>Journal of Membrane Science</i> , 2022, 652, 120467.	8.2	13
72	Polymerization of vinyl fluoride in ionic liquid and ionic solutions. <i>Polymer</i> , 2016, 82, 295-304.	3.8	12

#	ARTICLE	IF	CITATIONS
73	<i>110th Anniversary: The First Thermodynamic and Kinetic Analysis of Ammonia in Imidazolium-Based Ionic Liquids Using a Gravimetric Microbalance.</i> Industrial & Engineering Chemistry Research, 2019, 58, 4644-4655.	3.7	12
74	Mitigation of Iron and Aluminum Powder Deflagrations via Active Explosion Suppression in a 1 m <sup>3</sup> Sphere Vessel. Industrial & Engineering Chemistry Research, 2019, 58, 18007-18019.	3.7	11
75	Sorption of trifluoromethane in activated carbon. Adsorption, 2014, 20, 565-575.	3.0	10
76	Solubility and Diffusivity of Hydrofluoroolefin Refrigerants in a Polyol Ester Lubricant. Industrial & Engineering Chemistry Research, 2020, 59, 6279-6287.	3.7	10
77	Review on porous materials for the thermal stabilization of proteins. Microporous and Mesoporous Materials, 2022, 333, 111750.	4.4	10
78	High-Pressure Vapor-Liquid Equilibria of 1-Alkyl-1-Methylpyrrolidinium Bis(trifluoromethylsulfonyl)imide Ionic Liquids and CO <sub>2</sub> . Journal of Chemical & Engineering Data, 2019, 64, 4668-4678.	1.9	9
79	Effect of particle morphology on metal dust deflagration sensitivity and severity. Journal of Loss Prevention in the Process Industries, 2021, 70, 104396.	3.3	8
80	IR-spectroscopic studies of hydrogen-bonding solutions: Lineshape analysis of ethanol+hexane system. Applied Energy, 2007, 84, 863-873.	10.1	7
81	Extraction of Aluminum and Iron from Bauxite: A Unique Closed-Loop Ore Refining Process Utilizing Oxalate Chemistry. AIChE Journal, 0, , e17477.	3.6	7
82	Liquid-Liquid Equilibria in Binary Mixtures of Dihydroxy Alcohols and Imidazolium-Based Ionic Liquids. Journal of Chemical & Engineering Data, 2019, 64, 3179-3186.	1.9	6
83	Understanding Sulfur Content in Alkylate from Sulfuric Acid-Catalyzed C <sub>3</sub> /C <sub>4</sub> Alkylations. Energy & Fuels, 2019, 33, 4659-4670.	5.1	6
84	Mass Transfer Thermodynamics through a Gas-Liquid Interface. Journal of Physical Chemistry B, 2019, 123, 2576-2584.	2.6	6
85	Phase equilibrium and diffusivities of hydrofluorocarbons in a synthetic polyol ester lubricant. AIChE Journal, 2020, 66, e16241.	3.6	6
86	Solubility and Diffusivity of Bromodifluoromethane (Halon-1201) in Imidazolium Ionic Liquids: [C <sub>2</sub> C <sub>1</sub> im][Tf <sub>2</sub> N], [C <sub>4</sub> C <sub>1</sub> im][BF <sub>4</sub> ], and [C <sub>4</sub> C <sub>1</sub> im][PF <sub>6</sub> ]. Journal of Chemical & Engineering Data, 2020, 65, 3277-3286.	1.9	6
87	First Measurements for the Simultaneous Sorption of Difluoromethane and Pentafluoroethane Mixtures in Ionic liquids Using the Integral Mass Balance Method. Industrial & Engineering Chemistry Research, 2022, 61, 9774-9784.	3.7	6
88	Simulation and measurement of water-induced liquid-liquid phase separation of imidazolium ionic liquid mixtures. Journal of Chemical Physics, 2018, 149, 164503.	3.0	5
89	Thermochemical Insights into Stability and Hydration of Ion-Exchanged Zeolite ZK-5 (KFI Framework). Journal of Physical Chemistry C, 2020, 124, 26193-26202.	3.1	5
90	Consequence prediction for dust explosions involving interconnected vessels using computational fluid dynamics modeling. Journal of Loss Prevention in the Process Industries, 2020, 65, 104149.	3.3	5

#	ARTICLE	IF	CITATIONS
91	Structural Identification for the Reaction of Chlorosulfonic Acid with Tertiary N-Donor Ligand in Ionic Liquid or Zwitterionic Compound?. ACS Sustainable Chemistry and Engineering, 2019, 7, 4631-4636.	6.7	4
92	Air conditioning cycle simulations using a ultrahigh-speed centrifugal compressor for electric vehicle applications. International Journal of Refrigeration, 2021, 131, 803-816.	3.4	4
93	Protein Stabilization and Delivery: A Case Study of Invasion Plasmid Antigen D Adsorbed on Porous Silica. Langmuir, 2020, 36, 14276-14287.	3.5	3
94	Power generation from waste heat: Ionic liquid-based absorption cycle versus organic Rankine cycle. AIChE Journal, 2021, 67, e17038.	3.6	2
95	Development of pressure evolution modeling for the combustion of distinct metal dust morphologies. Journal of Loss Prevention in the Process Industries, 2022, 75, 104704.	3.3	2
96	Sorbents for treatment of hereditary hemochromatosis. Medicinal Chemistry Research, 2022, 31, 85-93.	2.4	2
97	Viscosity and Density of an ISO VG 32 Polyol Ester Lubricant Saturated with Compressed Hydrofluorocarbon Gases: R-134a, R-32, and R-125. Journal of Chemical & Engineering Data, 2022, 67, 1824-1833.	1.9	2
98	Theoretical calculation of polymer deposition thickness on a cylindrical substrate. AIChE Journal, 2001, 47, 1648-1663.	3.6	1
99	Thermodynamic measurement and modeling of vinyl fluoride solubility in aqueous lithium Bis(trifluoromethylsulfonyl)imide Li + Tf <sub>2</sub> N <sup>-</sup> A <sup>+</sup> ·H <sub>2</sub> O solutions. Fluid Phase Equilibria, 2017, 444, 61-68.	2.5	1
100	Modeling Heat and Mass Transfer of Long-Grain Hybrid Rice in a Chilled Environment. Applied Engineering in Agriculture, 2022, 38, 113-128.	0.7	1
101	A Sustainable Oxalate Process for Recovery of Metals from LiCoO <sub>2</sub> : Experimental and Modeling Study. Minerals, Metals and Materials Series, 2021, , 141-151.	0.4	0
102	Development of Silica-Immobilized Vaccines for Improving Thermo-Tolerance and Shelf-Life. Kansas Journal of Medicine, 2020, 13, 6-9.	0.4	0