

# Mark B Shiflett

## List of Publications by Year in descending order

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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	Development of pressure evolution modeling for the combustion of distinct metal dust morphologies. <i>Journal of Loss Prevention in the Process Industries</i> , 2022, 75, 104704.	3.3	2
2	Sorbents for treatment of hereditary hemochromatosis. <i>Medicinal Chemistry Research</i> , 2022, 31, 85-93.	2.4	2
3	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
4	Modeling Heat and Mass Transfer of Long-Grain Hybrid Rice in a Chilled Environment. <i>Applied Engineering in Agriculture</i> , 2022, 38, 113-128.	0.7	1
5	Review on porous materials for the thermal stabilization of proteins. <i>Microporous and Mesoporous Materials</i> , 2022, 333, 111750.	4.4	10
6	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
7	Phase Equilibria and Diffusivities of HFC-32 and HFC-125 in Ionic Liquids for the Separation of R-410A. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 816-830.	6.7	22
8	Lithium and Cobalt Recovery from $\text{LiCoO}_2$ Using Oxalate Chemistry: Scale-Up and Techno-Economic Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 5285-5294.	3.7	14
9	First Measurements for the Simultaneous Sorption of Difluoromethane and Pentafluoroethane Mixtures in Ionic liquids Using the Integral Mass Balance Method. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 9774-9784.	3.7	6
10	Multicomponent Refrigerant Separation Using Extractive Distillation with Ionic Liquids. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 9795-9812.	3.7	17
11	Viscosity and Density of an ISO VG 32 Polyol Ester Lubricant Saturated with Compressed Hydrofluorocarbon Gases: R-134a, R-32, and R-125. <i>Journal of Chemical &amp; Engineering Data</i> , 2022, 67, 1824-1833.	1.9	2
12	Gas solubility in ionic liquids. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2021, 28, 100425.	5.9	21
13	Power generation from waste heat: ionic liquid-based absorption cycle versus organic Rankine cycle. <i>AIChE Journal</i> , 2021, 67, e17038.	3.6	2
14	A Sustainable Oxalate Process for Recovery of Metals from $\text{LiCoO}_2$ : Experimental and Modeling Study. <i>Minerals, Metals and Materials Series</i> , 2021, , 141-151.	0.4	0
15	Effect of particle morphology on metal dust deflagration sensitivity and severity. <i>Journal of Loss Prevention in the Process Industries</i> , 2021, 70, 104396.	3.3	8
16	Air conditioning cycle simulations using a ultrahigh-speed centrifugal compressor for electric vehicle applications. <i>International Journal of Refrigeration</i> , 2021, 131, 803-816.	3.4	4
17	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
18	Process Designs for Separating R-410A, R-404A, and R-407C Using Extractive Distillation and Ionic Liquid Entrainers. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 16054-16067.	3.7	30

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19	Protein Stabilization and Delivery: A Case Study of Invasion Plasmid Antigen D Adsorbed on Porous Silica. <i>Langmuir</i> , 2020, 36, 14276-14287.	3.5	3
20	Thermochemical Insights into Stability and Hydration of Ion-Exchanged Zeolite ZK-5 (KFI Framework). <i>Journal of Physical Chemistry C</i> , 2020, 124, 26193-26202.	3.1	5
21	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
22	Review of Isobutane Alkylation Technology Using Ionic Liquid-Based Catalysts—Where Do We Stand?. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 15811-15838.	3.7	28
23	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. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 18222-18235.	3.7	43
24	Solubility and Diffusivity of Hydrofluoroolefin Refrigerants in a Polyol Ester Lubricant. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 6279-6287.	3.7	10
25	A Review of Porous Adsorbents for the Separation of Nitrogen from Natural Gas. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 13355-13369.	3.7	46
26	Consequence prediction for dust explosions involving interconnected vessels using computational fluid dynamics modeling. <i>Journal of Loss Prevention in the Process Industries</i> , 2020, 65, 104149.	3.3	5
27	Phase equilibrium and diffusivities of hydrofluorocarbons in a synthetic polyol ester lubricant. <i>AIChE Journal</i> , 2020, 66, e16241.	3.6	6
28	Solubility and Diffusivity of Bromodifluoromethane (Halon-1201) in Imidazolium Ionic Liquids: [C2C1im][Tf2N], [C4C1im][BF4], and [C4C1im][PF6]. <i>Journal of Chemical &amp; Engineering Data</i> , 2020, 65, 3277-3286.	1.9	6
29	Separation of Lithium and Cobalt from LiCoO <sub>2</sub> : A Unique Critical Metals Recovery Process Utilizing Oxalate Chemistry. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 6100-6108.	6.7	53
30	Development of Silica-Immobilized Vaccines for Improving Thermo-Tolerance and Shelf-Life. <i>Kansas Journal of Medicine</i> , 2020, 13, 6-9.	0.4	0
31	Metal Recovery Using Oxalate Chemistry: A Technical Review. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 15381-15393.	3.7	93
32	Liquid-Liquid Equilibria in Binary Mixtures of Dihydroxy Alcohols and Imidazolium-Based Ionic Liquids. <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 3179-3186.	1.9	6
33	Mitigation of Iron and Aluminum Powder Deflagrations via Active Explosion Suppression in a 1 m <sup>3</sup> Sphere Vessel. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 18007-18019.	3.7	11
34	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]. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 11072-11081.	3.7	21
35	High-Pressure Vapor-Liquid Equilibria of 1-Alkyl-1-Methylpyrrolidinium Bis(trifluoromethylsulfonyl)imide Ionic Liquids and CO <sub>2</sub> . <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 4668-4678.	1.9	9
36	110th Anniversary: The First Thermodynamic and Kinetic Analysis of Ammonia in Imidazolium-Based Ionic Liquids Using a Gravimetric Microbalance. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 4644-4655.	3.7	12

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37	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
38	Viscosity of 1-Alkyl-1-methylpyrrolidinium Bis(trifluoromethylsulfonyl)imide Ionic Liquids Saturated with Compressed CO <sub>2</sub> . Journal of Chemical & Engineering Data, 2019, 64, 4658-4667.	1.9	14
39	Structural Identification for the Reaction of Chlorosulfonic Acid with Tertiary N-Donor Ligand " Ionic Liquid or Zwitterionic Compound?. ACS Sustainable Chemistry and Engineering, 2019, 7, 4631-4636.	6.7	4
40	Mass Transfer Thermodynamics through a Gas-Liquid Interface. Journal of Physical Chemistry B, 2019, 123, 2576-2584.	2.6	6
41	Characterization of Thermal Stability and Heat Absorption for Suppressant Agent/Combustible Dust Mixtures via Thermogravimetric Analysis/Differential Scanning Calorimetry. Industrial & Engineering Chemistry Research, 2019, 58, 4674-4687.	3.7	14
42	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]. Industrial & Engineering Chemistry Research, 2019, 58, 1743-1753.	3.7	13
43	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
44	Computing the Composition of Ethanol-Water Mixtures Based on Experimental Density and Temperature Measurements. Fermentation, 2018, 4, 72.	3.0	13
45	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
46	Metal Dust Explosion Hazards: A Technical Review. Industrial & Engineering Chemistry Research, 2018, 57, 11473-11482.	3.7	22
47	Water at the Ionic Liquid-Gas Interface Examined by Ambient Pressure X-ray Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 7337-7343.	3.1	16
48	Ionic Liquids: Current State and Future Directions. ACS Symposium Series, 2017, , 1-13.	0.5	16
49	Density, Viscosity, and Vapor Pressure Measurements of Water + Lithium Bis(trifluoromethylsulfonyl)imide Solutions. Journal of Chemical & Engineering Data, 2017, 62, 2056-2066.	1.9	18
50	The solubility of gases in ionic liquids. AIChE Journal, 2017, 63, 4722-4737.	3.6	64
51	Thermodynamic measurement and modeling of vinyl fluoride solubility in aqueous lithium Bis(trifluoromethylsulfonyl)imide Li + Tf <sub>2</sub> N <sup>+</sup> ·H <sub>2</sub> O solutions. Fluid Phase Equilibria, 2017, 444, 61-68.	2.5	1
52	Polymerization of vinyl fluoride in ionic liquid and ionic solutions. Polymer, 2016, 82, 295-304.	3.8	12
53	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
54	Sorption of trifluoromethane in activated carbon. Adsorption, 2014, 20, 565-575.	3.0	10

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55	Sorption of trifluoromethane in zeolites and ionic liquid. <i>Journal of Chemical Thermodynamics</i> , 2013, 64, 40-49.	2.0	29
56	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
57	Separation of N <sub>2</sub> O and CO <sub>2</sub> using Room-Temperature Ionic Liquid [bmim][Ac]. <i>Separation Science and Technology</i> , 2012, 47, 411-421.	2.5	30
58	Phase Behavior of CO <sub>2</sub> in Room-Temperature Ionic Liquid 1-Ethyl-3-Ethylimidazolium Acetate. <i>ChemPhysChem</i> , 2012, 13, 1806-1817.	2.1	68
59	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]. <i>International Journal of Thermophysics</i> , 2012, 33, 412-436.	2.1	50
60	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]. <i>Fluid Phase Equilibria</i> , 2012, 316, 147-155.	2.5	37
61	Separation of N <sub>2</sub> O and CO <sub>2</sub> Using Room-Temperature Ionic Liquid [bmim][BF <sub>4</sub> ]. <i>Journal of Physical Chemistry B</i> , 2011, 115, 3478-3487.	2.6	56
62	Separation of tetrafluoroethylene and carbon dioxide using ionic liquids. <i>Separation and Purification Technology</i> , 2011, 79, 357-364.	7.9	47
63	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
64	Gas solubilities in ionic liquids using a generic van der Waals equation of state. <i>Journal of Supercritical Fluids</i> , 2010, 55, 846-851.	3.2	68
65	Separation of CO <sub>2</sub> and H <sub>2</sub> S using room-temperature ionic liquid [bmim][PF <sub>6</sub> ]. <i>Fluid Phase Equilibria</i> , 2010, 294, 105-113.	2.5	118
66	Carbon Dioxide Capture Using Ionic Liquid 1-Butyl-3-methylimidazolium Acetate. <i>Energy &amp; Fuels</i> , 2010, 24, 5781-5789.	5.1	275
67	Separation of CO <sub>2</sub> and H <sub>2</sub> S Using Room-Temperature Ionic Liquid [bmim][MeSO <sub>4</sub> ]. <i>Journal of Chemical &amp; Engineering Data</i> , 2010, 55, 4785-4793.	1.9	104
68	Liquid-Liquid Equilibria in Binary Mixtures Containing Substituted Benzenes with Ionic Liquid 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide. <i>Journal of Chemical &amp; Engineering Data</i> , 2010, 55, 346-353.	1.9	35
69	Separation of Carbon Dioxide and Sulfur Dioxide Using Room-Temperature Ionic Liquid [bmim][MeSO <sub>4</sub> ]. <i>Energy &amp; Fuels</i> , 2010, 24, 1001-1008.	5.1	108
70	Water Solubility in Ionic Liquids and Application to Absorption Cycles. <i>Industrial &amp; Engineering Chemistry Research</i> , 2010, 49, 9496-9503.	3.7	145
71	Chemical Absorption of Sulfur Dioxide in Room-Temperature Ionic Liquids. <i>Industrial &amp; Engineering Chemistry Research</i> , 2010, 49, 1370-1377.	3.7	145
72	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

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73	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
74	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
75	Phase behavior of {carbon dioxide+[bmim][Ac]} mixtures. Journal of Chemical Thermodynamics, 2008, 40, 25-31.	2.0	244
76	Physical and Chemical Absorptions of Carbon Dioxide in Room-Temperature Ionic Liquids. Journal of Physical Chemistry B, 2008, 112, 16654-16663.	2.6	396
77	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
78	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
79	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
80	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
81	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
82	Ammonia Solubilities in Room-Temperature Ionic Liquids. Industrial & Engineering Chemistry Research, 2007, 46, 1605-1610.	3.7	215
83	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
84	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
85	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
86	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
87	Thermal effect on C-H stretching vibrations of the imidazolium ring in ionic liquids. Physical Chemistry Chemical Physics, 2007, 9, 5018.	2.8	132
88	Hydrogen purification using room-temperature ionic liquids. Applied Energy, 2007, 84, 351-361.	10.1	112
89	IR-spectroscopic studies of hydrogen-bonding solutions: Lineshape analysis of ethanol+hexane system. Applied Energy, 2007, 84, 863-873.	10.1	7
90	Vapor-liquid equilibria of ammonia+ionic liquid mixtures. Applied Energy, 2007, 84, 1258-1273.	10.1	225

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91	Hydrogen substitution effect on the solubility of perhalogenated compounds in ionic liquid [bmim][PF6]. <i>Fluid Phase Equilibria</i> , 2007, 259, 210-217.	2.5	33
92	Vapor-Liquid-Liquid Equilibria of Pentafluoroethane and Ionic Liquid [bmim][PF6] Mixtures Studied with the Volumetric Method. <i>Journal of Physical Chemistry B</i> , 2006, 110, 14436-14443.	2.6	79
93	Solubility and Diffusivity of Difluoromethane in Room-Temperature Ionic Liquids. <i>Journal of Chemical &amp; Engineering Data</i> , 2006, 51, 483-495.	1.9	189
94	Solubility and diffusivity of hydrofluorocarbons in room-temperature ionic liquids. <i>AIChE Journal</i> , 2006, 52, 1205-1219.	3.6	286
95	Vapor-Liquid-Liquid Equilibria of Hydrofluorocarbons + 1-Butyl-3-methylimidazolium Hexafluorophosphate. <i>Journal of Chemical &amp; Engineering Data</i> , 2006, 51, 1931-1939.	1.9	88
96	Gaseous Absorption of Fluoromethane, Fluoroethane, and 1,1,2,2-Tetrafluoroethane in 1-Butyl-3-Methylimidazolium Hexafluorophosphate. <i>Industrial &amp; Engineering Chemistry Research</i> , 2006, 45, 6375-6382.	3.7	81
97	Solubility and diffusivity of 1,1,1,2-tetrafluoroethane in room-temperature ionic liquids. <i>Fluid Phase Equilibria</i> , 2006, 242, 220-232.	2.5	140
98	Global phase behaviors of trifluoromethane in ionic liquid [bmim][PF6]. <i>AIChE Journal</i> , 2006, 52, 3952-3957.	3.6	102
99	Solubilities and Diffusivities of Carbon Dioxide in Ionic Liquids: [bmim][PF6] and [bmim][BF4]. <i>Industrial &amp; Engineering Chemistry Research</i> , 2005, 44, 4453-4464.	3.7	560
100	Theoretical calculation of polymer deposition thickness on a cylindrical substrate. <i>AIChE Journal</i> , 2001, 47, 1648-1663.	3.6	1
101	On the preparation of supported nanoporous carbon membranes. <i>Journal of Membrane Science</i> , 2000, 179, 275-282.	8.2	95
102	Extraction of Aluminum and Iron from Bauxite: A Unique Closed-Loop Ore Refining Process Utilizing Oxalate Chemistry. <i>AIChE Journal</i> , 0, , e17477.	3.6	7