Pedro J Carvalho

List of Publications by Citations

102 papers	5,884 citations	38 h-index	76 g-index
105 ext. papers	6,354 ext. citations	4 avg, IF	5.7 L-index

#	Paper	IF	Citations
102	Surface tensions of imidazolium based ionic liquids: anion, cation, temperature and water effect. *Journal of Colloid and Interface Science*, **2007**, 314, 621-30	9.3	369
101	High-Pressure Densities and Derived Thermodynamic Properties of Imidazolium-Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2007**, 52, 80-88	2.8	357
100	Mutual solubilities of water and hydrophobic ionic liquids. *Journal of Physical Chemistry B*, **2007**, 111, 13082-9	3.4	347
99	Mutual solubilities of water and the [C(n)mim][Tf(2)N] hydrophobic ionic liquids. *Journal of Physical Chemistry B*, **2008**, 112, 1604-10	3.4	289
98	P□□ Measurements of Imidazolium-Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2007**, 52, 1881-1888	2.8	257
97	Thermophysical Characterization of Ionic Liquids Able To Dissolve Biomass. *Journal of Chemical & Engineering Data*, **2011**, 56, 4813-4822	2.8	254
96	Densities and Derived Thermodynamic Properties of Imidazolium-, Pyridinium-, Pyrrolidinium-, and Piperidinium-Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2008**, 53, 805-811	2.8	216
95	Effect of Water on the Viscosities and Densities of 1-Butyl-3-methylimidazolium Dicyanamide and 1-Butyl-3-methylimidazolium Tricyanomethane at Atmospheric Pressure□ *Journal of Chemical & Engineering Data*, **2010**, 55, 645-652	2.8	200
94	Viscosity of (C2□14) 1-alkyl-3-methylimidazolium bis(trifluoromethylsulfonyl)amide ionic liquids in an extended temperature range. *Fluid Phase Equilibria*, **2011**, 301, 22-32	2.5	191
93	Specific solvation interactions of CO2 on acetate and trifluoroacetate imidazolium based ionic liquids at high pressures. *Journal of Physical Chemistry B*, **2009**, 113, 6803-12	3.4	186
92	Surface Tensions for the 1-Alkyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide Ionic Liquids. *Journal of Chemical & Engineering Data*, **2008**, 53, 1346-1350	2.8	186
91	Ion specific effects on the mutual solubilities of water and hydrophobic ionic liquids. *Journal of Physical Chemistry B*, **2009**, 113, 202-11	3.4	168
90	High pressure phase behavior of carbon dioxide in 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide and 1-butyl-3-methylimidazolium dicyanamide ionic liquids. *Journal of Supercritical Fluids*, **2009**, 50, 105-111	4.2	149
89	Thermophysical properties of pure and water-saturated tetradecyltrihexylphosphonium-based ionic liquids. *Journal of Chemical Thermodynamics*, **2011**, 43, 948-957	2.9	140
88	High carbon dioxide solubilities in trihexyltetradecylphosphonium-based ionic liquids. *Journal of Supercritical Fluids*, **2010**, 52, 258-265	4.2	138
87	Measurements and Correlation of High-Pressure Densities of Imidazolium-Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2008**, 53, 1914-1921	2.8	123
86	High pressure phase behavior of carbon dioxide in 1-alkyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide ionic liquids. *Journal of Supercritical Fluids*, **2009**, 48, 99-107	4.2	121

85	Predictive methods for the estimation of thermophysical properties of ionic liquids. *RSC Advances*, **2012**, 2, 7322	3.7	114
84	Understanding the impact of the central atom on the ionic liquid behavior: phosphonium vs ammonium cations. *Journal of Chemical Physics*, **2014**, 140, 064505	3.9	109
83	Structural and Positional Isomerism Influence in the Physical Properties of Pyridinium NTf2-Based Ionic Liquids: Pure and Water-Saturated Mixtures *Journal of Chemical & Engineering Data*, **2010**, 55, 4514-4520	2.8	104
82	Solubility of Water in Tetradecyltrihexylphosphonium-Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2008**, 53, 2378-2382	2.8	101
81	High pressure CO2 solubility in N-methyl-2-hydroxyethylammonium protic ionic liquids. *Journal of Supercritical Fluids*, **2011**, 56, 224-230	4.2	93
80	On the Nonideality of CO2 Solutions in Ionic Liquids and Other Low Volatile Solvents. *Journal of Physical Chemistry Letters*, **2010**, 1, 774-780	6.4	90
79	The polarity effect upon the methane solubility in ionic liquids: a contribution for the design of ionic liquids for enhanced CO2/CH4 and H2S/CH4 selectivities. *Energy and Environmental Science*, **2011**, 4, 4614	35.4	82
78	Thermophysical properties of sulfonium- and ammonium-based ionic liquids. *Fluid Phase Equilibria*, **2014**, 381, 36-45	2.5	80
77	Surface Tensions of Bis(trifluoromethylsulfonyl)imide Anion-Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2010**, 55, 3807-3812	2.8	78
76	Vapor−liquid Equilibria of Water + Alkylimidazolium-Based Ionic Liquids: Measurements and Perturbed-Chain Statistical Associating Fluid Theory Modeling. *Industrial & Engineering Chemistry Research*, **2014**, 53, 3737-3748	3.9	69
75	Dispelling some myths about the CO2 solubility in ionic liquids. *Physical Chemistry Chemical Physics*, **2016**, 18, 14757-71	3.6	68
74	Densities, Viscosities and Derived Thermophysical Properties of Water-Saturated Imidazolium-Based Ionic Liquids. *Fluid Phase Equilibria*, **2016**, 407, 188-196	2.5	54
73	Surface Tension of Liquid Fluorocompounds. *Journal of Chemical & Engineering Data*, **2006**, 51, 1820-1824	2.8	52
72	The effect of the cation aromaticity upon the thermophysical properties of piperidinium- and pyridinium-based ionic liquids. *Fluid Phase Equilibria*, **2014**, 375, 80-88	2.5	51
71	Thermophysical properties of phosphonium-based ionic liquids. *Fluid Phase Equilibria*, **2015**, 400, 103-113	2.5	50
70	Thermophysical Properties of Glycols and Glymes. *Journal of Chemical & Engineering Data*, **2015**, 60, 3721-3737	2.8	45
69	Vapor-Liquid Equilibria of Imidazolium Ionic Liquids with Cyano Containing Anions with Water and Ethanol. *Journal of Physical Chemistry B*, **2015**, 119, 10287-303	3.4	41
68	A new microebulliometer for the measurement of the vapor−liquid equilibrium of ionic liquid systems. *Fluid Phase Equilibria*, **2013**, 354, 156-165	2.5	39

67	High pressure separation of greenhouse gases from air with 1-ethyl-3-methylimidazolium methyl-phosphonate. *International Journal of Greenhouse Gas Control*, **2013**, 19, 299-309	4.2	38
66	Carbon dioxide solubility in aqueous solutions of NaCl: Measurements and modeling with electrolyte equations of state. *Fluid Phase Equilibria*, **2015**, 388, 100-106	2.5	38
65	Chameleonic behavior of ionic liquids and its impact on the estimation of solubility parameters. *Journal of Physical Chemistry B*, **2011**, 115, 12879-88	3.4	38
64	Measurements and Correlation of High-Pressure Densities of Phosphonium Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2011**, 56, 2205-2217	2.8	37
63	Fluorination effects on the thermodynamic, thermophysical and surface properties of ionic liquids. *Journal of Chemical Thermodynamics*, **2016**, 97, 354-361	2.9	35
62	Thermophysical characterization of N-methyl-2-hydroxyethylammonium carboxilate ionic liquids. *Journal of Chemical Thermodynamics*, **2014**, 68, 221-234	2.9	34
61	Solubility of water in fluorocarbons: Experimental and COSMO-RS prediction results. *Journal of Chemical Thermodynamics*, **2010**, 42, 213-219	2.9	34
60	Influence of Nanosegregation on the Surface Tension of Fluorinated Ionic Liquids. *Langmuir*, **2016**, 32, 6130-9	4	33
59	Non-ideality of Solutions of NH3, SO2, and H2S in Ionic Liquids and the Prediction of Their Solubilities Using the Flory□Huggins Model. *Energy & Fuels*, **2010**, 24, 6662-6666	4.1	33
58	New measurements and modeling of high pressure thermodynamic properties of glycols. *Fluid Phase Equilibria*, **2017**, 436, 113-123	2.5	29
57	High pressure solubility of CH4, N2O and N2 in 1-butyl-3-methylimidazolium dicyanamide: Solubilities, selectivities and soft-SAFT modeling. *Journal of Supercritical Fluids*, **2016**, 110, 56-64	4.2	29
56	Green solvents for CO2 capture. *Current Opinion in Green and Sustainable Chemistry*, **2019**, 18, 25-30	7.9	29
55	PowellSnakes II: a fast Bayesian approach to discrete object detection in multi-frequency astronomical data sets. *Monthly Notices of the Royal Astronomical Society*, **2012**, 427, 1384-1400	4.3	28
54	Toluene/n-Heptane Separation by Extractive Distillation with Tricyanomethanide-Based Ionic Liquids: Experimental and CPA EoS Modeling. *Industrial & Engineering Chemistry Research*, **2018**, 57, 14242-14253	3.9	24
53	Solubility of carbon dioxide in encapsulated ionic liquids. *Separation and Purification Technology*, **2018**, 196, 41-46	8.3	23
52	Surface Tensions of Ionic Liquids: Non-Regular Trend Along the Number of Cyano Groups. *Fluid Phase Equilibria*, **2016**, 409, 458-465	2.5	22
51	Thermodynamic characterization of deep eutectic solvents at high pressures. *Fluid Phase Equilibria*, **2019**, 500, 112249	2.5	21
50	High pressure density and solubility for the CO2+1-ethyl-3-methylimidazolium ethylsulfate system. *Journal of Supercritical Fluids*, **2014**, 88, 46-55	4.2	20

49	Thermophysical properties of two ammonium-based protic ionic liquids. *Journal of Solution Chemistry*, **2015**, 44, 703-717	1.8	19
48	A methodology to parameterize SAFT-type equations of state for solid precursors of deep eutectic solvents: the example of cholinium chloride. *Physical Chemistry Chemical Physics*, **2019**, 21, 15046-15061	3.6	17
47	Volumetric and acoustical properties of aqueous mixtures of N-methyl-2-hydroxyethylammonium propionate at T=(298.15 to 333.15)K. *Journal of Chemical Thermodynamics*, **2015**, 88, 44-60	2.9	17
46	New Experimental Data and Modeling of Glymes: Toward the Development of a Predictive Model for Polyethers. *Industrial & Engineering Chemistry Research*, **2017**, 56, 7830-7844	3.9	16
45	Non-Ideality in Thymol + Menthol Type V Deep Eutectic Solvents. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 2203-2211	8.3	15
44	Odd-even effect on the formation of aqueous biphasic systems formed by 1-alkyl-3-methylimidazolium chloride ionic liquids and salts. *Journal of Chemical Physics*, **2018**, 148,	3.9	14
43	Volumetric and acoustical properties of aqueous mixtures of N-methyl-2-hydroxyethylammonium butyrate and N-methyl-2-hydroxyethylammonium pentanoate at T = (298.15 to 333.15) K. *Journal of Chemical Thermodynamics*, **2016**, 97, 191-205	2.9	14
42	Vapor Liquid Equilibria of Binary Mixtures of 1-Butyl-3-methylimidazolium Triflate (CmimTfO) and Molecular Solvents: n-Alkyl Alcohols and Water. *Journal of Physical Chemistry B*, **2018**, 122, 6017-6032	3.4	13
41	Selection and characterization of non-ideal ionic liquids mixtures to be used in CO2 capture. *Fluid Phase Equilibria*, **2020**, 518, 112621	2.5	13
40	Separation of benzene from methylcycloalkanes by extractive distillation with cyano-based ionic liquids: Experimental and CPA EoS modelling. *Separation and Purification Technology*, **2020**, 234, 116128	8.3	13
39	High-pressure solubility of CO2 in glymes. *Fuel*, **2018**, 219, 120-125	7.1	12
38	Integrative platform for the selective recovery of intracellular carotenoids and lipids from Rhodotorula glutinis CCT-2186 yeast using mixtures of bio-based solvents. *Green Chemistry*, **2020**, 22, 8478-8494	10	10
37	Reverse osmosis performance on stripped phenolic sour water treatment - A study on the effect of oil and grease and osmotic pressure. *Journal of Environmental Management*, **2020**, 261, 110229	7.9	9
36	Influence of temperature and pressure on the density and speed of sound of 2-hydroxyethylammonium propionate ionic liquid. *Journal of Chemical Thermodynamics*, **2018**, 122, 183-193	2.9	9
35	High Pressure Phase Behavior of Carbon Dioxide in Carbon Disulfide and Carbon Tetrachloride. *Journal of Chemical & Engineering Data*, **2011**, 56, 2786-2792	2.8	9
34	Hollow Fibers with Encapsulated Green Amino Acid-Based Ionic Liquids for Dehydration. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 17763-17771	8.3	9
33	Measurement and Modeling of Isobaric Vapor–Liquid Equilibrium of Water + Glycols. *Journal of Chemical & Engineering Data*, **2018**, 63, 2394-2401	2.8	8
32	Toward Modeling the Aromatic/Aliphatic Separation by Extractive Distillation with Tricyanomethanide-Based Ionic Liquids Using CPA EoS. *Industrial & Engineering Chemistry Research*, **2019**, 58, 19681-19692	3.9	7

31	Compact Source Detection in Multichannel Microwave Surveys: From SZ Clusters to Polarized Sources. *Advances in Astronomy*, **2012**, 2012, 1-14	0.9	7
30	Encapsulated Amino-Acid-Based Ionic Liquids for CO2 Capture. *European Journal of Inorganic Chemistry*, **2020**, 2020, 3158-3166	2.3	7
29	Development of a robust soft-SAFT model for protic ionic liquids using new high-pressure density data. *Fluid Phase Equilibria*, **2021**, 539, 113036	2.5	7
28	Impact of water on the [C4C1im][Ac] ability for the CO2/CH4 separation. *Journal of CO2 Utilization*, **2019**, 31, 115-123	7.6	6
27	Surface crystallization of ionic liquid crystals. *Physical Chemistry Chemical Physics*, **2019**, 21, 17792-17800	3.6	6
26	Influence of temperature and pressure on the density and speed of sound of N-ethyl-2-hydroxyethylammonium propionate ionic liquid. *Journal of Chemical Thermodynamics*, **2019**, 131, 303-313	2.9	6
25	Liquid□liquid Equilibrium and Extraction Performance of Aqueous Biphasic Systems Composed of Water, Cholinium Carboxylate Ionic Liquids and K2CO3. *Journal of Chemical & Engineering Data* , **2019**, 64, 4946-4955	2.8	5
24	Selecting Critical Properties of Terpenes and Terpenoids through Group-Contribution Methods and Equations of State. *Industrial & Engineering Chemistry Research*, **2017**, 56, 9895-9905	3.9	5
23	Binary Mixtures of Ionic Liquids in Aqueous Solution: Towards an Understanding of their Salting-In/Salting-Out Phenomena. *Journal of Solution Chemistry*, **2019**, 48, 983-991	1.8	5
22	Evaluation of the solvent structural effect upon the vapor □quid equilibrium of [C4C1im][Cl]□+ alcohols. *Fluid Phase Equilibria*, **2017**, 440, 36-44	2.5	4
21	High pressure density of tricyanomethanide-based ionic liquids: Experimental and PC-SAFT modelling. *Fluid Phase Equilibria*, **2020**, 520, 112652	2.5	4
20	Isobaric vapor-liquid equilibrium of water + glymes binary mixtures: Experimental measurements and molecular thermodynamic modelling. *Fluid Phase Equilibria*, **2020**, 513, 112547	2.5	4
19	Experimental measurements and modeling of CO2 solubility in sunflower, castor and rapeseed oils. *Journal of Supercritical Fluids*, **2013**, 82, 191-199	4.2	4
18	. *Industrial & Engineering Chemistry Research*, **2020**, 59, 15058-15068	3.9	4
17	Solubility of H2S in ammonium-based ionic liquids. *Journal of Chemical Thermodynamics*, **2021**, 154, 106326	2.9	4
16	The impact of oligomeric anions on the speciation of protic ionic liquids. *Fluid Phase Equilibria*, **2021** , 531, 112919	2.5	4
15	Study of the partition of sodium diclofenac and norfloxacin in aqueous two-phase systems based on copolymers and dextran. *Fluid Phase Equilibria*, **2021**, 530, 112868	2.5	4
14	Sunyaev□el□ovich profile fitting with joint AMI-Planck analysis. *Monthly Notices of the Royal Astronomical Society*, **2019**, 486, 2116-2128	4.3	3

13	Infinite Dilution Activity Coefficients in the Smectic and Isotropic Phases of Tetrafluoroborate-Based Ionic Liquids. *Journal of Chemical & Engineering Data*, **2021**, 66, 2587-2596	2.8	3
12	Physical modelling of galaxy clusters detected by thePlancksatellite. *Monthly Notices of the Royal Astronomical Society*, **2019**, 483, 3529-3544	4.3	3
11	Pilot scale reverse osmosis refinery wastewater treatment a techno-economical and sustainability assessment. *Environmental Science: Water Research and Technology*, **2021**, 7, 549-561	4.2	2
10	High-Pressure Density of Bis(1-alkyl-3-methylimidazolium) Tetraisothiocyanatocobaltate Ionic Liquids: Experimental and PC-SAFT with Volume-Shift Modeling. *Journal of Chemical & Engineering Data*, **2019**, 64, 4827-4833	2.8	1
9	The excess volumes of protic ionic liquids and its significance to their thermodynamic modelling. *Fluid Phase Equilibria*, **2022**, 552, 113277	2.5	1
8	Use of cork granules as an effective sustainable material to clean-up spills of crude oil and derivatives. *Environmental Science and Pollution Research*, **2020**, 27, 366-378	5.1	1
7	A corrosion evaluation of mild carbon steel in reclaimed refinery stripped sour water. *Journal of Environmental Management*, **2020**, 272, 111080	7.9	1
6	Densities, heat capacities, viscosities, 1H- and 13C-NMR spectra, and solvatochromic parameters of binary mixtures of 1,3-dimethyl-1,3-diazinan-2-one (DMPU) and water. *Journal of Chemical Thermodynamics*, **2021**, 161, 106550	2.9	1
5	Characterization of cholinium-carboxylate-based aqueous biphasic systems. *Fluid Phase Equilibria*, **2022**, 558, 113458	2.5	1
4	Polymeric foams from recycled thermoplastic poly(ethylene terephthalate). *Journal of Cellular Plastics*, **2020**, 0021955X2094856	1.5	0
3	Effect of dicationic ionic liquids on cloud points of tergitol surfactant and the formation of aqueous micellar two-phase systems. *Journal of Materials Science*, **2021**, 56, 12171-12182	4.3	
2	Predicting the concentration of hazardous phenolic compounds in refinery wastewater-a multivariate data analysis approach. *Environmental Science and Pollution Research*, **2021**, 1	5.1	
1	Encapsulated Protic Ionic Liquids as Sustainable Materials for CO2 Separation. *Industrial & Engineering Chemistry Research*, **2022**, 61, 4046-4057	3.9	