

# Jacobo Troncoso

## List of Publications by Year in descending order

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Version: 2024-02-01

103  
papers

4,122  
citations

136740

32  
h-index

123241

61  
g-index

107  
all docs

107  
docs citations

107  
times ranked

2300  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | A detailed thermodynamic analysis of [C4mim][BF4] + water as a case study to model ionic liquid aqueous solutions. <i>Green Chemistry</i> , 2004, 6, 369-381.   | 4.6 | 334       |
| 2  | Thermodynamic Properties of Imidazolium-Based Ionic Liquids: Densities, Heat Capacities, and Enthalpies of Fusion of [bmim][PF6] and [bmim][NTf2]. <i>Journal of Chemical &amp; Engineering Data</i> , 2006, 51, 1856-1859.                 | 1.0 | 254       |
| 3  | Excess Magnitudes for Ionic Liquid Binary Mixtures with a Common Ion. <i>Journal of Chemical &amp; Engineering Data</i> , 2007, 52, 1369-1374.  | 1.0 | 197       |
| 4  | Viscosity-induced errors in the density determination of room temperature ionic liquids using vibrating tube densitometry. <i>Fluid Phase Equilibria</i> , 2007, 252, 96-102.   | 1.4 | 191       |
| 5  | Excess enthalpy, density, and heat capacity for binary systems of alkylimidazolium-based ionic liquids+water. <i>Journal of Chemical Thermodynamics</i> , 2009, 41, 161-166.  | 1.0 | 180       |
| 6  | Excess properties for binary systems ionic liquid+ethanol: Experimental results and theoretical description using the ERAS model. <i>Fluid Phase Equilibria</i> , 2008, 274, 59-67.   | 1.4 | 159       |
| 7  | Density and refractive index in mixtures of ionic liquids and organic solvents: Correlations and predictions. <i>Journal of Chemical Thermodynamics</i> , 2008, 40, 949-956.  | 1.0 | 139       |
| 8  | Experimental methodology for precise determination of density of RTILs as a function of temperature and pressure using vibrating tube densimeters. <i>Journal of Chemical Thermodynamics</i> , 2010, 42, 553-563.                           | 1.0 | 117       |
| 9  | Excess molar properties for binary systems of alkylimidazolium-based ionic liquids+nitromethane. Experimental results and ERAS-model calculations. <i>Journal of Chemical Thermodynamics</i> , 2009, 41, 334-341.                           | 1.0 | 115       |
| 10 | Thermal Stability of Ionic Liquids for Their Application as New Absorbents. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 15718-15727.   | 1.8 | 114       |
| 11 | Viscosities for Ionic Liquid Binary Mixtures with a Common Ion. <i>Journal of Solution Chemistry</i> , 2008, 37, 677-688.   | 0.6 | 110       |
| 12 | Density and viscosity of three (2,2,2-trifluoroethanol + 1-butyl-3-methylimidazolium) ionic liquid binary systems. <i>Journal of Chemical Thermodynamics</i> , 2014, 70, 101-110.   | 1.0 | 102       |
| 13 | Density and Refractive Index for Binary Systems of the Ionic Liquid [Bmim][BF4] with Methanol, 1,3-Dichloropropane, and Dimethyl Carbonate. <i>Journal of Solution Chemistry</i> , 2007, 36, 1219-1230.                                     | 0.6 | 91        |
| 14 | Automated measuring device of (p, $\rho$ , T) data. <i>Fluid Phase Equilibria</i> , 2003, 208, 141-154.   | 1.4 | 85        |
| 15 | Systematic Determination of Densities and Speeds of Sound of Nitroethane + Isomers of Butanol in the Range (283.15~308.15) K. <i>Journal of Chemical &amp; Engineering Data</i> , 2000, 45, 594-599.  | 1.0 | 79        |
| 16 | Long-term thermal stability of five imidazolium ionic liquids. <i>Journal of Chemical Thermodynamics</i> , 2013, 65, 184-190.   | 1.0 | 79        |
| 17 | Thermodynamic Properties of Dodecane + 1-Butanol and + 2-Butanol Systems. <i>Journal of Chemical &amp; Engineering Data</i> , 2004, 49, 1789-1793.  | 1.0 | 74        |
| 18 | Density and Heat Capacity as a Function of Temperature for Binary Mixtures of 1-Butyl-3-methylpyridinium Tetrafluoroborate + Water, + Ethanol, and + Nitromethane. <i>Journal of Chemical &amp; Engineering Data</i> , 2007, 52, 2261-2265. | 1.0 | 65        |

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|----|--|-----|-----------|
| 19 | Pressure and Temperature Dependence of Isobaric Heat Capacity for [Emim][BF <sub>4</sub> ], [Bmim][BF <sub>4</sub> ], [Hmim][BF <sub>4</sub> ], and [Omim][BF <sub>4</sub> ]. Journal of Chemical & Engineering Data, 2010, 55, 600-604.   | 1.0 | 63        |
| 20 | Densities and Excess Enthalpies for Ionic Liquids + Ethanol or + Nitromethane. Journal of Chemical & Engineering Data, 2008, 53, 1298-1301.  | 1.0 | 57        |
| 21 | Heat Capacity of Associated Systems. Experimental Data and Application of a Two-State Model to Pure Liquids and Mixtures. Journal of Physical Chemistry B, 2007, 111, 1119-1128.   | 1.2 | 53        |
| 22 | Thermophysical Characterization of Liquids Using Precise Density and Isobaric Heat Capacity Measurements As a Function of Pressure. Journal of Chemical & Engineering Data, 2009, 54, 904-915.   | 1.0 | 53        |
| 23 | Long-term thermal stability of some 1-butyl-1-methylpyrrolidinium ionic liquids. Journal of Chemical Thermodynamics, 2014, 74, 51-57.  | 1.0 | 52        |
| 24 | Excess volumes and excess heat capacities of nitromethane+(1-propanol or 2-propanol). Fluid Phase Equilibria, 1999, 157, 93-102.   | 1.4 | 50        |
| 25 | Unusual Behavior of the Thermodynamic Response Functions of Ionic Liquids. Journal of Physical Chemistry Letters, 2010, 1, 211-214.  | 2.1 | 42        |
| 26 | Heat capacity and thermal expansion anomalies in the nitromethane+1-butanol mixture near its upper critical point. Physical Review E, 2002, 66, 031507.  | 0.8 | 40        |
| 27 | p <sup>VT</sup> Data for the Dimethyl Carbonate + Decane System. Journal of Chemical & Engineering Data, 2004, 49, 923-927.  | 1.0 | 40        |
| 28 | Thermal stability of aprotic ionic liquids as potential lubricants. Comparison with synthetic oil bases. Journal of Chemical Thermodynamics, 2018, 116, 185-196.   | 1.0 | 37        |
| 29 | Excess volumes and excess heat capacities for alkanediol+water systems in the temperature interval (283.15-313.15)K. Fluid Phase Equilibria, 2013, 356, 1-10.  | 1.4 | 36        |
| 30 | Temperature Dependence of Densities and Speeds of Sound of Nitromethane + Butanol Isomers in the Range (288.15-308.15) K. Journal of Chemical & Engineering Data, 2001, 46, 312-316.   | 1.0 | 34        |
| 31 | Excess isobaric molar heat capacities and excess molar volumes for ethanol+n-decane and n-undecane systems. Journal of Chemical Thermodynamics, 2005, 37, 935-940.   | 1.0 | 34        |
| 32 | On the isobaric thermal expansivity of liquids. Journal of Chemical Physics, 2011, 134, 094502.  | 1.2 | 34        |
| 33 | Thermodynamic behaviour of the binary systems dimethyl carbonate+n-octane or n-nonane. Thermochemica Acta, 2005, 433, 128-133.   | 1.2 | 33        |
| 34 | An accurate calibration method for high pressure vibrating tube densimeters in the density interval (700 to 1600)kgÅ <sup>-3</sup> . Journal of Chemical Thermodynamics, 2009, 41, 1060-1068.  | 1.0 | 32        |
| 35 | Two ways of looking at Prigogine and Defay's equationElectronic supplementary information (ESI) available: Sources of vE(x,T) and hE(x,T) data. See <a href="http://www.rsc.org/suppdata/cp/b2/b200292b/">http://www.rsc.org/suppdata/cp/b2/b200292b/</a> . Physical Chemistry Chemical Physics, 2002, 4, 2251-2259. | 1.3 | 31        |
| 36 | Dependence against Temperature and Pressure of the Isobaric Thermal Expansivity of Room Temperature Ionic Liquids. Journal of Chemical & Engineering Data, 2010, 55, 595-599.  | 1.0 | 31        |

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|----|---|-----|-----------|
| 37 | Isobaric Thermal Expansivity for Ionic Liquids with a Common Cation as a Function of Temperature and Pressure. <i>Journal of Chemical &amp; Engineering Data</i> , 2010, 55, 590-594.   | 1.0 | 28        |
| 38 | Highly precise experimental device for determining the heat capacity of liquids under pressure. <i>Review of Scientific Instruments</i> , 2007, 78, 055103.   | 0.6 | 26        |
| 39 | New calibration methodology for calorimetric determination of isobaric thermal expansivity of liquids as a function of temperature and pressure. <i>Journal of Chemical Thermodynamics</i> , 2008, 40, 1607-1611.   | 1.0 | 25        |
| 40 | Thermal conductivity of ionic liquids under pressure. <i>Fluid Phase Equilibria</i> , 2020, 515, 112573.  | 1.4 | 25        |
| 41 | Behavior of the Environmentally Compatible Absorbent 1-Butyl-3-methylimidazolium Tetrafluoroborate with 2,2,2-Trifluoroethanol: Experimental Densities at High Pressures and Modeling of <i>PVT</i> and Phase Equilibria Behavior with PC-SAFT EoS. <i>Industrial &amp; Engineering Chemistry Research</i> , 2011, 50, 4065-4076. | 1.8 | 24        |
| 42 | Speed of sound in ionic liquids with a common ion as a function of pressure and temperature. <i>Journal of Chemical Thermodynamics</i> , 2018, 116, 235-240.  | 1.0 | 24        |
| 43 | Heat Capacities, Densities, and Speeds of Sound for {(1,5-Dichloropentane or 1,6-Dichlorohexane) + Dodecane}. <i>Journal of Chemical &amp; Engineering Data</i> , 2004, 49, 333-338.  | 1.0 | 23        |
| 44 | Anomalous Excess Heat Capacities of Ethanol+Alkane Mixtures. <i>International Journal of Thermophysics</i> , 2004, 25, 787-803.   | 1.0 | 22        |
| 45 | Study of the volumetric properties of weakly associated alcohols by means of high-pressure speed of sound measurements. <i>Journal of Chemical Thermodynamics</i> , 2006, 38, 893-899.  | 1.0 | 21        |
| 46 | Hydrophobicity and thermodynamic response for aqueous solutions of amphiphiles. <i>Chemical Physics</i> , 2016, 472, 36-43.   | 0.9 | 21        |
| 47 | Solution thermodynamics near the liquid-liquid critical point. <i>Fluid Phase Equilibria</i> , 2007, 258, 7-15.   | 1.4 | 20        |
| 48 | Fully automatized apparatus for determining speed of sound for liquids in the temperature and pressure interval (283.15-343.15) K and (0.1-95) MPa. <i>Journal of Chemical Thermodynamics</i> , 2017, 104, 102-109.   | 1.0 | 20        |
| 49 | Thermophysical properties of choline and pyridinium based ionic liquids as advanced materials for energy applications. <i>Journal of Chemical Thermodynamics</i> , 2020, 141, 105947.   | 1.0 | 20        |
| 50 | Isobaric thermal expansivity behaviour against temperature and pressure of associating fluids. <i>Journal of Chemical Thermodynamics</i> , 2010, 42, 23-27.   | 1.0 | 19        |
| 51 | Thermal properties of ionic systems near the liquid-liquid critical point. <i>Journal of Chemical Physics</i> , 2011, 135, 214507.  | 1.2 | 19        |
| 52 | Excess molar volumes and excess molar enthalpies in binary systems N-alkyl-triethylammonium bis(trifluoromethylsulfonyl)imide+methanol. <i>Fluid Phase Equilibria</i> , 2014, 363, 156-166.   | 1.4 | 19        |
| 53 | Thermal refraction in ionic liquids induced by a train of femtosecond laser pulses. <i>Optics and Laser Technology</i> , 2014, 61, 1-7.   | 2.2 | 19        |
| 54 | Generality of hydrophobic phenomena for aqueous solutions of amphiphiles. <i>Chemical Physics Letters</i> , 2015, 640, 184-187.   | 1.2 | 19        |

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|----|--|-----|-----------|
| 55 | Water's two-critical-point scenario in the Ising paradigm. <i>Journal of Chemical Physics</i> , 2019, 150, 244509.   | 1.2 | 19        |
| 56 | Title is missing!. <i>International Journal of Thermophysics</i> , 2000, 21, 1419-1437.  | 1.0 | 18        |
| 57 | Griffiths-Wheeler geometrical picture of critical phenomena: Experimental testing for liquid-liquid critical points. <i>Physical Review E</i> , 2005, 71, 021503.  | 0.8 | 18        |
| 58 | Estimation of critical amplitudes of the correlation length by means of calorimetric and viscosimetric measurements. <i>Chemical Physics</i> , 2006, 324, 483-488.   | 0.9 | 18        |
| 59 | Volumetric behaviour of the (2,2,4-trimethylpentane+methylbenzene+butan-1-ol) ternary system and its binary sub-systems within the temperature range (298.15–328.15)K. <i>Journal of Chemical Thermodynamics</i> , 2013, 64, 137-150.  | 1.0 | 18        |
| 60 | Highly precise (liquid+liquid) equilibrium and heat capacity measurements near the critical point for [Bmim][BF <sub>4</sub> ]+1H, 1H, 2H, 2H perfluorooctanol. <i>Journal of Chemical Thermodynamics</i> , 2013, 65, 131-137.         | 1.0 | 18        |
| 61 | Isobaric Thermal Expansivity for Nonpolar Compounds. <i>Journal of Chemical &amp; Engineering Data</i> , 2010, 55, 2173-2179.  | 1.0 | 16        |
| 62 | Density and viscosity study of pyridinium based ionic liquids as potential absorbents for natural refrigerants: Experimental and modelling. <i>Fluid Phase Equilibria</i> , 2015, 405, 37-45.  | 1.4 | 16        |
| 63 | Dynamic light scattering study of aggregation in aqueous solutions of five amphiphiles. <i>Journal of Molecular Liquids</i> , 2017, 241, 525-529.  | 2.3 | 16        |
| 64 | Structural and physical properties of a new reversible and continuous thermochromic ionic liquid in a wide temperature interval: [BMIM] <sub>4</sub> [Ni(NCS) <sub>6</sub> ]. <i>New Journal of Chemistry</i> , 2018, 42, 15561-15571. | 1.4 | 16        |
| 65 | Isobaric thermal expansivity of the binary system 1-hexanol+n-hexane as a function of temperature and pressure. <i>Fluid Phase Equilibria</i> , 2009, 276, 1-6.  | 1.4 | 15        |
| 66 | Studies of Volumetric and Transport Properties of Ionic Liquid-Water Mixtures and Its Viability To Be Used in Absorption Systems. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 5068-5077.                               | 3.2 | 15        |
| 67 | Isobaric heat capacity of nanostructured liquids with potential use as lubricants. <i>Journal of Chemical Thermodynamics</i> , 2018, 123, 107-116.   | 1.0 | 15        |
| 68 | Criticality of the [C4mim][BF <sub>4</sub> ] + Water System. <i>ACS Symposium Series</i> , 2005, , 175-186.  | 0.5 | 14        |
| 69 | Thermodynamic consistency near the liquid-liquid critical point. <i>Journal of Chemical Physics</i> , 2009, 130, 044506.   | 1.2 | 14        |
| 70 | Quantitative analysis of the W-shaped excess heat capacities of binary liquid mixtures in the light of the local composition concept. <i>Fluid Phase Equilibria</i> , 2005, 235, 201-210.  | 1.4 | 13        |
| 71 | Synthesis, microstructure and volumetry of novel metal thiocyanate ionic liquids with [BMIM] cation. <i>Journal of Molecular Liquids</i> , 2019, 283, 638-651.   | 2.3 | 13        |
| 72 | Maximum in density of electrolyte solutions: Learning about ion-water interactions and testing the Madrid-2019 force field. <i>Journal of Chemical Physics</i> , 2022, 156, 154502.  | 1.2 | 13        |

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|----|---|-----|-----------|
| 73 | Thermodynamic Properties of Dichloromethane, Bromochloromethane, and Dibromomethane under Elevated Pressure: Experimental Results and SAFT-VR Mie Predictions. <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 720-730.        | 1.8 | 12        |
| 74 | Isobaric molar heat capacities of the ternary system dimethyl carbonate+p-xylene+n-decane. <i>Fluid Phase Equilibria</i> , 2005, 232, 207-213.  | 1.4 | 11        |
| 75 | Determination of the critical anomaly in the viscosity for the dimethyl carbonate+(undecane or) Tj ETQq1 1 0.784314 rgBT /Overlock 11   | 1.4 | 11        |
| 76 | Dependence on molecular parameters of the heat capacity critical behaviour for nitroalkane+alcohol binary systems. <i>Chemical Physics</i> , 2009, 358, 225-229.  | 0.9 | 11        |
| 77 | Volumetric behavior of the ternary system (methyl tert-butyl ether + methylbenzene + butan-1-ol) and its binary sub-system (methyl tert-butyl ether + butan-1-ol) within the temperature range (298.15 to) Tj ETQq1 1 0.784314 rgBT /Overlock 11  | 1.4 | 11        |
| 78 | Nonlinear absorption in ionic liquids with transition metallic atoms in the anion. <i>Optical Materials</i> , 2016, 52, 144-149.  | 1.7 | 10        |
| 79 | Speed of sound as a function of temperature and pressure for propane derivatives. <i>Journal of Chemical Thermodynamics</i> , 2017, 109, 117-123.   | 1.0 | 10        |
| 80 | Heat capacity anomalies of associated liquid-alkane mixtures near the liquid-liquid critical point. <i>Chemical Physics</i> , 2009, 360, 106-109.   | 0.9 | 9         |
| 81 | The temperature of maximum density for amino acid aqueous solutions. An experimental and molecular dynamics study. <i>Fluid Phase Equilibria</i> , 2020, 521, 112703.   | 1.4 | 9         |
| 82 | Viscosity anomaly near the critical point in nitrobenzene + alkane binary systems. <i>Physical Review E</i> , 2005, 71, 041503.   | 0.8 | 8         |
| 83 | Influence of chemical structure on critical parameters for dimethyl carbonate+alkane systems. <i>Journal of Thermal Analysis and Calorimetry</i> , 2007, 89, 25-29.   | 2.0 | 8         |
| 84 | The critical behavior of the dielectric constant in the polar + polar binary liquid mixture nitromethane + 3-pentanol: An unusual sign of its critical amplitude in the one-phase region. <i>Journal of Chemical Physics</i> , 2011, 135, 024508. | 1.2 | 8         |
| 85 | The isobaric heat capacity of liquid water at low temperatures and high pressures. <i>Journal of Chemical Physics</i> , 2017, 147, 084501.  | 1.2 | 8         |
| 86 | Evidence of current stabilization after long-time decay in high-TC superconductors. <i>Cryogenics</i> , 2005, 45, 135-140.  | 0.9 | 7         |
| 87 | Isobaric Heat Capacity of Ionic Liquids in Aqueous Solutions. A Review. <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 4611-4618.  | 1.0 | 7         |
| 88 | Temperature of Maximum Density for Binary Aqueous Solutions of Five Amino Acids. <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 5847-5856.   | 1.0 | 6         |
| 89 | Temperature of maximum density of proteins in water: Î±-Chymotrypsin and bovine serum albumin. <i>Journal of Chemical Thermodynamics</i> , 2020, 142, 106008.   | 1.0 | 6         |
| 90 | Thermal conductivity measurements for organic liquids at high pressure. <i>Journal of Chemical Thermodynamics</i> , 2020, 142, 106005.  | 1.0 | 6         |

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|-----|---|-----|-----------|
| 91  | Heat capacity anomalies along the critical isotherm in fluid-fluid phase transitions. Journal of Chemical Physics, 2010, 132, 154509.   | 1.2 | 5         |
| 92  | Isobaric Thermal Expansivity of Highly Polar Nitrogen Compounds at Temperatures from (278.15 to) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 1537-1541.   | 1.0 | 5         |
| 93  | A new methodology for determining the temperature of maximum density against pressure. Application to 2-propanol and ethanol aqueous solutions. Fluid Phase Equilibria, 2021, 549, 113191.                                  | 1.4 | 5         |
| 94  | The increment of the temperature of maximum density of water by addition of small amounts of <i>tert</i> -butanol: Experimental data and microscopic description revisited. Journal of Chemical Physics, 2022, 156, 104502. | 1.2 | 5         |
| 95  | Calorimetric search for reliable excess enthalpy data as a function of temperature. Journal of Thermal Analysis and Calorimetry, 2006, 83, 263-268.   | 2.0 | 4         |
| 96  | Heat capacity singularity of binary liquid mixtures at the liquid-liquid critical point. Physical Review E, 2013, 88, 042107.   | 0.8 | 4         |
| 97  | Effect of hydrophobic phenomena over the volumetric behavior of aqueous ionic liquid solutions. Journal of Molecular Liquids, 2021, 333, 115962.  | 2.3 | 3         |
| 98  | Strange behaviour of transport properties in novel metal thiocyanate based ionic liquids. Journal of Molecular Liquids, 2021, 340, 117164.  | 2.3 | 3         |
| 99  | Solution thermodynamics near the liquid-liquid critical point. II. Excess second-order derivatives. Fluid Phase Equilibria, 2009, 280, 144-150.   | 1.4 | 2         |
| 100 | Note: Evidence against 2D-Ising criticality in aqueous solutions with added salt. Journal of Chemical Physics, 2013, 139, 176101.   | 1.2 | 1         |
| 101 | Volumetric characterization of the thermal denaturation of $\hat{\pm}$ -chymotrypsin at pH 2.2. Journal of Chemical Thermodynamics, 2020, 149, 106147.  | 1.0 | 1         |
| 102 | Nonlinear absorption in bis(1-butyl-3-methylimidazolium) tetrathiocyanatozincate [BMIM] <sub>2</sub> [Zn(SCN) <sub>4</sub> ] &nbsp;an ionic liquid with a transition metal in the anionic moiety. , 0, .                    |     | 1         |
| 103 | Volumetric and thermal excess properties of the {(1,2-dichloroethane or 1,4-dichlorobutane) + n-dodecane systems}. Journal of Chemical Thermodynamics, 2020, 141, 105031.   | 1.0 | 0         |