

Antonin Chapoy

List of Publications by Year in descending order

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107
papers

4,416
citations

94269

37
h-index

114278

63
g-index

111
all docs

111
docs citations

111
times ranked

2464
citing authors

#	ARTICLE	IF	CITATIONS
1	Vapour-liquid equilibria in the carbon dioxide-water system, measurement and modelling from 278.2 to 318.2K. Fluid Phase Equilibria, 2004, 226, 333-344.	1.4	299
2	Equilibrium Data of Hydrogen, Methane, Nitrogen, Carbon Dioxide, and Natural Gas in Semi-Clathrate Hydrates of Tetrabutyl Ammonium Bromide. Journal of Chemical & Engineering Data, 2007, 52, 2153-2158.	1.0	276
3	Low-Pressure Molecular Hydrogen Storage in Semi-clathrate Hydrates of Quaternary Ammonium Compounds. Journal of the American Chemical Society, 2007, 129, 746-747.	6.6	198
4	Gas solubility measurement and modeling for methane-water and methane-ethane-n-butane-water systems at low temperature conditions. Fluid Phase Equilibria, 2004, 220, 113-121.	1.4	176
5	Experimental and thermodynamic modelling of systems containing water and ethylene glycol: Application to flow assurance and gas processing. Fluid Phase Equilibria, 2009, 276, 24-30.	1.4	142
6	Phase Relations and Binary Clathrate Hydrate Formation in the System H ₂ -THF-H ₂ O. Langmuir, 2007, 23, 3440-3444.	1.6	139
7	CO ₂ Hydrates Could Provide Secondary Safety Factor in Subsurface Sequestration of CO ₂ . Environmental Science & Technology, 2010, 44, 1509-1514.	4.6	122
8	Separation and capture of carbon dioxide from CO ₂ /H ₂ syngas mixture using semi-clathrate hydrates. Chemical Engineering Research and Design, 2011, 89, 1747-1751.	2.7	105
9	Solubility measurement and modeling for the system propane-water from 277.62 to 368.16K. Fluid Phase Equilibria, 2004, 226, 213-220.	1.4	104
10	Experimental Measurement and Phase Behavior Modeling of Hydrogen Sulfide-Water Binary System. Industrial & Engineering Chemistry Research, 2005, 44, 7567-7574.	1.8	86
11	Phase equilibria for petroleum reservoir fluids containing water and aqueous methanol solutions: Experimental measurements and modelling using the CPA equation of state. Fluid Phase Equilibria, 2009, 278, 109-116.	1.4	83
12	Experimental Measurement and Thermodynamic Modeling of Water Content in Methane and Ethane Systems. Industrial & Engineering Chemistry Research, 2004, 43, 7148-7162.	1.8	82
13	Measurement and modelling of high pressure density and interfacial tension of (gas + n-alkane) binary mixtures. Journal of Chemical Thermodynamics, 2016, 97, 55-69.	1.0	80
14	Experimental determination and prediction of methane hydrate stability in alcohols and electrolyte solutions. Fluid Phase Equilibria, 2009, 275, 127-131.	1.4	79
15	Solubility measurement and modeling of water in the gas phase of the methane/water binary system at temperatures from 283.08 to 318.12K and pressures up to 34.5MPa. Fluid Phase Equilibria, 2003, 214, 101-117.	1.4	77
16	Effect of impurities on thermophysical properties and phase behaviour of a CO ₂ -rich system in CCS. International Journal of Greenhouse Gas Control, 2013, 19, 92-100.	2.3	77
17	Development of a New Alpha Function for the Peng-Robinson Equation of State: Comparative Study of Alpha Function Models for Pure Gases (Natural Gas Components) and Water-Gas Systems. International Journal of Thermophysics, 2004, 25, 133.	1.0	76
18	Measurement and modelling of interfacial tension in methane/water and methane/brine systems at reservoir conditions. Fluid Phase Equilibria, 2016, 409, 301-311.	1.4	76

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19	Giant Barocaloric Effect at the Spin Crossover Transition of a Molecular Crystal. <i>Advanced Materials</i> , 2019, 31, e1807334.	11.1	75
20	Study of the impact of high temperatures and pressures on the equilibrium densities and interfacial tension of the carbon dioxide/water system. <i>Journal of Chemical Thermodynamics</i> , 2016, 93, 404-415.	1.0	69
21	Gas Solubility Measurement and Modeling for the Nitrogen + Water System from 274.18 K to 363.02 K. <i>Journal of Chemical & Engineering Data</i> , 2004, 49, 1110-1115.	1.0	66
22	On the phase behaviour of the (carbon dioxide + water) systems at low temperatures: Experimental and modelling. <i>Journal of Chemical Thermodynamics</i> , 2012, 47, 6-12.	1.0	63
23	Binary Ethanol-Methane Clathrate Hydrate Formation in the System $\text{CH}_4\text{-CO}_2\text{-H}_2\text{O}$: Phase Equilibria and Compositional Analyses. <i>Journal of Physical Chemistry C</i> , 2009, 113, 12602-12607.	1.5	60
24	Methane/natural gas storage and delivered capacity for activated carbons in dry and wet conditions. <i>Fuel</i> , 2008, 87, 7-13.	3.4	58
25	pH of CO ₂ saturated water and CO ₂ saturated brines: Experimental measurements and modelling. <i>International Journal of Greenhouse Gas Control</i> , 2017, 66, 190-203.	2.3	58
26	Measurements and Thermodynamic Modeling of Vapor-Liquid Equilibria in Ethane-Water Systems from 274.26 to 343.08 K. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 5418-5424.	1.8	57
27	Estimation of Water Content for Methane + Water and Methane + Ethane + n-Butane + Water Systems Using a New Sampling Device. <i>Journal of Chemical & Engineering Data</i> , 2005, 50, 1157-1161.	1.0	54
28	Freezing Point Depression of Electrolyte Solutions: Experimental Measurements and Modeling Using the Cubic-Plus-Association Equation of State. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 3983-3989.	1.8	54
29	Can <i>n</i> -Propanol Form Hydrate?. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 1689-1694.	1.8	52
30	Effect of Common Impurities on the Phase Behavior of Carbon-Dioxide-Rich Systems: Minimizing the Risk of Hydrate Formation and Two-Phase Flow. <i>SPE Journal</i> , 2011, 16, 921-930.	1.7	52
31	Hydrate and Phase Behavior Modeling in CO ₂ -Rich Pipelines. <i>Journal of Chemical & Engineering Data</i> , 2015, 60, 447-453.	1.0	49
32	Measurement and Modeling of CO ₂ Frost Points in the CO ₂ -Methane Systems. <i>Journal of Chemical & Engineering Data</i> , 2011, 56, 2971-2975.	1.0	48
33	Interfacial tension of CO ₂ + brine systems: Experiments and predictive modelling. <i>Advances in Water Resources</i> , 2017, 103, 64-75.	1.7	48
34	Comparative study of vapour-liquid equilibrium and density modelling of mixtures related to carbon capture and storage with the SRK, PR, PC-SAFT and SAFT-VR Mie equations of state for industrial uses. <i>Fluid Phase Equilibria</i> , 2017, 440, 19-35.	1.4	44
35	Multiscale investigation of CO ₂ hydrate self-sealing potential for carbon geo-sequestration. <i>Chemical Engineering Journal</i> , 2020, 381, 122646.	6.6	41
36	Density, speed of sound and derived thermodynamic properties of a synthetic natural gas. <i>Journal of Natural Gas Science and Engineering</i> , 2017, 40, 249-266.	2.1	40

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37	Vapor-liquid equilibrium data for the carbon dioxide (CO ₂) + difluoromethane (R32) system at temperatures from 283.12 to 343.25 K and pressures up to 7.46 MPa. <i>Fluid Phase Equilibria</i> , 2004, 218, 95-101.	1.4	39
38	New Two-Dimensional Particle-Scale Model To Simulate Asphaltene Deposition in Wellbores and Pipelines. <i>Energy & Fuels</i> , 2018, 32, 2661-2672.	2.5	39
39	Vapour-liquid equilibrium data for the hydrogen sulphide (H ₂ S)+carbon dioxide (CO ₂) system at temperatures from 258 to 313K. <i>Fluid Phase Equilibria</i> , 2013, 356, 223-228.	1.4	37
40	Do We Have New Solutions to the Old Problem of Gas Hydrates?. <i>Energy & Fuels</i> , 2012, 26, 4053-4058.	2.5	35
41	Hydrocarbons-water phase equilibria using the CPA equation of state with a group contribution method. <i>Canadian Journal of Chemical Engineering</i> , 2015, 93, 432-442.	0.9	35
42	Development of a multiphase flash in presence of hydrates: Experimental measurements and validation with the CPA equation of state. <i>Fluid Phase Equilibria</i> , 2016, 414, 117-132.	1.4	35
43	Gas hydrates in low water content gases: Experimental measurements and modelling using the CPA equation of state. <i>Fluid Phase Equilibria</i> , 2010, 296, 9-14.	1.4	34
44	Subsurface Carbon Dioxide Sequestration and Storage in Methane Hydrate Reservoirs Combined with Clean Methane Energy Recovery. <i>Energy & Fuels</i> , 2021, 35, 1567-1579.	2.5	34
45	A Semiempirical Approach for Estimating the Water Content of Natural Gases. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 7137-7147.	1.8	33
46	Mutual effects of paraffin waxes and clathrate hydrates: A multiphase integrated thermodynamic model and experimental measurements. <i>Fluid Phase Equilibria</i> , 2016, 427, 438-459.	1.4	32
47	Measurement of the Water Solubility in the Gas Phase of the Ethane + Water Binary System near Hydrate Forming Conditions. <i>Journal of Chemical & Engineering Data</i> , 2003, 48, 957-966.	1.0	31
48	Water Content Measurement and Modeling in the Nitrogen + Water System. <i>Journal of Chemical & Engineering Data</i> , 2005, 50, 541-545.	1.0	31
49	Bimodal model for predicting the emulsion-hydrate mixture viscosity in high water cut systems. <i>Fuel</i> , 2011, 90, 3343-3351.	3.4	31
50	Development of a Henry's constant correlation and solubility measurements of n-pentane, i-pentane, cyclopentane, n-hexane, and toluene in water. <i>Journal of Chemical Thermodynamics</i> , 2008, 40, 1030-1037.	1.0	28
51	Experimental Clathrate Dissociations for the Hydrogen + Water and Hydrogen + Tetrabutylammonium Bromide + Water Systems. <i>Journal of Chemical & Engineering Data</i> , 2010, 55, 5323-5327.	1.0	28
52	Measured densities and derived thermodynamic properties of CO ₂ -rich mixtures in gas, liquid and supercritical phases from 273 K to 423 K and pressures up to 126 MPa. <i>Journal of Chemical Thermodynamics</i> , 2017, 111, 157-172.	1.0	28
53	Gas Solubility: A Key to Estimating the Water Content of Natural Gases. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 4825-4829.	1.8	27
54	Viscosity of binary and multicomponent hydrocarbon fluids at high pressure and high temperature conditions: Measurements and predictions. <i>Journal of Petroleum Science and Engineering</i> , 2013, 112, 153-160.	2.1	26

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55	Experimental water content measurements of carbon dioxide in equilibrium with hydrates at (223.15 to) Tj ETQq1 1.0.784314.rgBT /Ov	1.0	26
56	Densities and derived thermophysical properties of the 0.9505 \hat{A} CO ₂ + 0.0495 \hat{A} H ₂ S mixture from 273 \hat{A} K to 353 \hat{A} K and pressures up to 41 \hat{A} MPa. Fluid Phase Equilibria, 2016, 423, 156-171.	1.4	26
57	An Evaluation of Risk of Hydrate Formation at the Top of a Pipeline. Oil and Gas Facilities, 2014, 3, 67-72.	0.4	25
58	CO ₂ solubility in formation water under sequestration conditions. Fluid Phase Equilibria, 2018, 463, 80-90.	1.4	25
59	Investigation into the effect of subcooling on the kinetics of hydrate formation. Journal of Chemical Thermodynamics, 2018, 117, 91-96.	1.0	25
60	Clathrate hydrate equilibria in mixed monoethylene glycol and electrolyte aqueous solutions. Journal of Chemical Thermodynamics, 2012, 48, 7-12.	1.0	24
61	Carbon dioxide solubility in Triethylene Glycol and aqueous solutions. Fluid Phase Equilibria, 2016, 419, 39-49.	1.4	24
62	Experimental Measurement and Modeling of the Solubility of Methane in Methanol and Ethanol. Journal of Chemical & Engineering Data, 2016, 61, 666-673.	1.0	21
63	Study on CO ₂ Hydrate Formation Kinetics in Saline Water in the Presence of Low Concentrations of CH ₄ . ACS Omega, 2019, 4, 18210-18218.	1.6	20
64	Water Content of CO ₂ -rich Mixtures: Measurements and Modeling using the Cubic-Plus-Association Equation of State. Journal of Natural Gas Engineering, 2016, 1, 85-97.	0.3	16
65	Phase Inversion in Water \hat{A} Oil Emulsions with and without Gas Hydrates. Energy & Fuels, 2011, 25, 5736-5745.	2.5	15
66	Measurement and Modeling of Water Content in Low Temperature Hydrate \hat{A} Methane and Hydrate \hat{A} Natural Gas Systems. Journal of Chemical & Engineering Data, 2011, 56, 2932-2935.	1.0	15
67	New experimental density data and derived thermophysical properties of carbon dioxide \hat{A} Sulphur dioxide binary mixture (CO ₂ - SO ₂) in gas, liquid and supercritical phases from 273 \hat{A} K to 353 \hat{A} K and at pressures up to 42 \hat{A} MPa. Fluid Phase Equilibria, 2017, 454, 64-77.	1.4	15
68	Viscosity of CO ₂ -rich mixtures from 243 \hat{A} K to 423 \hat{A} K at pressures up to 155 \hat{A} MPa: New experimental viscosity data and modelling. Journal of Chemical Thermodynamics, 2018, 118, 100-114.	1.0	15
69	Solubility Measurement and Modeling of Methane in Methanol and Ethanol Aqueous Solutions. Journal of Chemical & Engineering Data, 2016, 61, 3200-3207.	1.0	14
70	Developing a Hydrate-Monitoring System. SPE Projects, Facilities and Construction, 2008, 4, 1-6.	0.2	13
71	Experimental and modelling study of the densities of the hydrogen sulphide \hat{A} methane mixtures at 253, 273 and 293 \hat{A} K and pressures up to 30 \hat{A} MPa. Fluid Phase Equilibria, 2016, 427, 371-383.	1.4	12
72	Transport of CO ₂ : Presentation of New Thermophysical Property Measurements and Phase Diagrams. Energy Procedia, 2017, 114, 6844-6859.	1.8	12

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73	Measurements and Modeling of High-Pressure O_2 and CO_2 Solubility in Brine ($H_2O + NaCl$) between 303 and 373 K and Pressures up to 36 MPa. <i>Journal of Chemical & Engineering Data</i> , 2021, 66, 609-620.	1.0	12
74	HYDRAFLOW: A Multiphase Cold Flow Technology for Offshore Flow Assurance Challenges. , 2008, , .		10
75	Clathrate hydrate equilibria in light olefins and mixed methane-olefins systems. <i>Fluid Phase Equilibria</i> , 2013, 337, 150-155.	1.4	10
76	A New Thermodynamic Model for Paraffin Precipitation in Highly Asymmetric Systems at High Pressure Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 10208-10217.	1.8	10
77	Effect of Common Impurities on the Phase Behaviour of Carbon Dioxide Rich Systems: Minimizing the Risk of Hydrate Formation and Two-Phase Flow. , 2009, , .		9
78	Gas hydrate equilibria in the presence of monoethylene glycol, sodium chloride and sodium bromide at pressures up to 150 MPa. <i>Journal of Chemical Thermodynamics</i> , 2018, 118, 193-197.	1.0	9
79	Hydrates in High MEG Concentration Systems. , 2012, , 366-373.		8
80	An Evaluation of Risk of Hydrate Formation at the Top of a Pipeline. , 2012, , .		8
81	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 1: Low-Conversion Thermal Cracking Modeling. <i>Energy & Fuels</i> , 2012, 26, 2600-2610.	2.5	8
82	Thermophysical Properties of Typical CCUS Fluids: Experimental and Modeling Investigation of Density. <i>Journal of Chemical & Engineering Data</i> , 2021, 66, 116-129.	1.0	8
83	Development of a new method for measurement of the water dew/frost point of gas. <i>Fluid Phase Equilibria</i> , 2021, 530, 112873.	1.4	7
84	Phase Behavior in Natural Gas + Glycol Systems, Part 1: Tri(ethylene glycol) (TEG) and Its Aqueous Solutions. <i>Journal of Chemical & Engineering Data</i> , 2021, 66, 4075-4093.	1.0	7
85	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 2. Migration and Separation Gas Chromatography Modeling. <i>Energy & Fuels</i> , 2013, 27, 2336-2350.	2.5	6
86	Controlling Hydrate Slurry Transportability by Optimizing Anti-Agglomerant Usage in High Water Cut Systems. , 2011, , .		5
87	A Novel Technique for Monitoring Hydrate Safety Margin. , 2011, , .		5
88	Experimental Study: The Impact of Dissolved Water on the Viscosity of Reservoir Fluids at HPHT Conditions. <i>Journal of Chemical & Engineering Data</i> , 2015, 60, 674-682.	1.0	5
89	Elemental mercury partitioning in high pressure fluids part 1: Literature review and measurements in single components. <i>Fluid Phase Equilibria</i> , 2020, 520, 112660.	1.4	5
90	Vapour-liquid equilibrium data for the carbon dioxide (CO_2)-carbon monoxide (CO) system. <i>Journal of Chemical Thermodynamics</i> , 2020, 150, 106180.	1.0	5

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91	Prediction of methanol content in natural gas with the GC-PR-CPA model. Journal of Natural Gas Science and Engineering, 2015, 27, 745-750.	2.1	4
92	Phase Behavior of CO ₂ in Monoethylene Glycol between 263.15–343.15 K and 0.2–40.3 MPa: An Experimental and Modeling Approach. Journal of Chemical & Engineering Data, 2017, 62, 4154-4159.	1.0	4
93	Density, Speed of Sound, and Other Derived Properties of Ethanol at Pressures up to 65 MPa. Journal of Chemical & Engineering Data, 2018, 63, 2486-2499.	1.0	4
94	Phase Equilibria of Waxy Live Oil Systems Containing CO ₂ : Experimental Measurements and Thermodynamic Modeling. Energy & Fuels, 2021, 35, 3731-3741.	2.5	4
95	Phase Equilibrium of Three Binary Mixtures Containing NO and Components Present in Ambient Air. Journal of Chemical & Engineering Data, 2018, 63, 1021-1026.	1.0	3
96	On the water content in CO ₂ + CH ₄ and CO ₂ -rich mixtures: Experimental and modelling evaluation at temperatures from 233.15 to 288.15 K and pressures up to 15 MPa. Journal of Natural Gas Science and Engineering, 2020, 84, 103654.	2.1	3
97	Modelling Phase Equilibria of Complicated Systems Containing Petroleum Reservoir Fluids. , 2009, , .		2
98	Modeling of Transport Properties Using the SAFT-VR Mie Equation of State. , 2015, , .		2
99	Determination of distribution factors for heavy n-alkanes (nC ₁₂ -nC ₉₈) in high temperature gas chromatography. Journal of Chromatography A, 2019, 1591, 138-146.	1.8	2
100	Elemental mercury partitioning in high pressure fluids part 2: Model validations and measurements in multicomponent systems. Fluid Phase Equilibria, 2020, 523, 112773.	1.4	2
101	Establishing the Maximum Carbon Number for Reliable Quantitative Gas Chromatographic Analysis of Heavy Ends Hydrocarbons. Part 3. Coupled Pyrolysis-GC Modeling. Energy & Fuels, 2019, 33, 2045-2056.	2.5	1
102	Experimental Study to Estimate CO ₂ Solubility in a High Pressure High Temperature HPHT Reservoir Carbonate Aquifer. , 2019, , .		1
103	Vapour-Liquid Equilibrium Study for the Carbon Dioxide and Hydrogen Sulphide in Deionized Water and NaCl Aqueous Solution at Temperature from 373.15 to 423.15 K. , 2021, , .		1
104	On the Phase Behaviour of the CO ₂ + N ₂ O ₄ system at low temperatures. Chemical Engineering Science, 2022, , 117726.	1.9	1
105	Development of Experimental Techniques, Equipment and Thermodynamic Modelling for Investigating Systems with High CO ₂ Concentrations. , 2011, , .		0
106	Reactive Transport and Its Implications on Heavy Oil HTGC Analysis. A Coupled Thermo-Hydro-Chemical (THC) Multiphysics Modelling Approach. , 0, , .		0
107	Characterization of Reservoir Fluids: A Predictive Model for Interfacial and Bulk Phase Equilibrium Properties. , 2018, , .		0