Kaj Thomsen

List of Publications by Year
in descending order

119	4,192	76326	128289
papers	citations	40 h-index	60 g-index

121	121	121	2789
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Modeling of vaporâ€“liquidâ€“solid equilibrium in gasâ€“aqueous electrolyte systems. Chemical Engineering Science, 1999, 54, 1787-1802.	3.8	241
2	Correlation and prediction of thermal properties and phase behaviour for a class of aqueous electrolyte systems. Chemical Engineering Science, 1996, 51, 3675-3683.	3.8	157
3	Chilled ammonia process for CO2 capture. International Journal of Greenhouse Gas Control, 2010, 4, 131-136.	4.6	141
4	The Debye-HÃ¼ckel theory and its importance in modeling electrolyte solutions. Fluid Phase Equilibria, 2018, 462, 130-152.	2.5	130
5	Calculation of Liquid Waterâ€“Hydrateâ€“Methane Vapor Phase Equilibria from Molecular Simulations. Journal of Physical Chemistry B, 2010, 114, 5775-5782.	2.6	118
6	Chilled ammonia process for CO2 capture. Energy Procedia, 2009, 1, 1035-1042.	1.8	117
7	Predictive screening of ionic liquids for dissolving cellulose and experimental verification. Green Chemistry, 2016, 18, 6246-6254.	9.0	110
8	Properties of cryobrines on Mars. Icarus, 2011, 212, 123-130.	2.5	99
9	Extended UNIQUAC model for correlation and prediction of vapourâ€“liquidâ€“solid equilibria in aqueous salt systems containing non-electrolytes. Part A. Methanolâ€“waterâ€“salt systems. Chemical Engineering Science, 2000, 55, 2673-2686.	3.8	94
10	An electrolyte CPA equation of state for mixed solvent electrolytes. AICHE Journal, 2015, 61, 2933-2950.	3.6	92
11	Extended UNIQUAC model for thermodynamic modeling of CO2 absorption in aqueous alkanolamine solutions. Fluid Phase Equilibria, 2009, 282, 121-132.	2.5	91
12	Equilibrium Total Pressure and CO₂ Solubility in Binary and Ternary Aqueous Solutions of 2-(Diethylamino)ethanol (DEEA) and 3-(Methylamino)propylamine (MAPA). Journal of Chemical & Engineering Data, 2014, 59, 764-774.	1.9	85
13	Prediction of mineral scale formation in geothermal and oilfield operations using the Extended UNIQUAC model. Geothermics, 2006, 35, 239-284.	3.4	80
14	Modeling of Carbon Dioxide Absorption by Aqueous Ammonia Solutions Using the Extended UNIQUAC Model. Industrial & Engineering Chemistry Research, 2010, 49, 12663-12674.	3.7	78
15	Comparison of the Debyeâ€“HÃ¼ckel and the Mean Spherical Approximation Theories for Electrolyte Solutions. Industrial & Engineering Chemistry Research, 2012, 51, 5353-5363.	3.7	77
16	Inhibition of Structure I and II Gas Hydrates using Synthetic and Biological Kinetic Inhibitors. Energy & Fuels, 2011, 25, 17-23.	5.1	76
17	Extended UNIQUAC model for correlation and prediction of vaporâ€“liquidâ€“liquidâ€“solid equilibria in aqueous salt systems containing non-electrolytes. Part B. Alcohol (ethanol, propanols,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	3.8	75
18	Kinetics of absorption of carbon dioxide into aqueous potassium salt of proline. International Journal of Greenhouse Gas Control, 2012, 8, 169-179.	4.6	75

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19	Process simulation of CO2 capture with aqueous ammonia using the Extended UNIQUAC model. International Journal of Greenhouse Gas Control, 2012, 10, 74-87.	4.6	74
20	Experimental measurement and modeling of the rate of absorption of carbon dioxide by aqueous ammonia. International Journal of Greenhouse Gas Control, 2011, 5, 1149-1162.	4.6	73
21	Modeling of Dielectric Properties of Aqueous Salt Solutions with an Equation of State. Journal of Physical Chemistry B, 2013, 117, 10523-10533.	2.6	73
22	Multicomponent equations of state for electrolytes. AICHE Journal, 2007, 53, 989-1005.	3.6	72
23	Modeling electrolyte solutions with the extended universal quasichemical (UNIQUAC) model. Pure and Applied Chemistry, 2005, 77, 531-542.	1.9	66
24	Prediction of mineral scale formation in geothermal and oilfield operations using the extended UNIQUAC model. Geothermics, 2005, 34, 61-97.	3.4	64
25	Design of a Eutectic Freeze Crystallization process for multicomponent waste water stream. Chemical Engineering Research and Design, 2010, 88, 1290-1296.	5.6	63
26	Propane hydrate nucleation: Experimental investigation and correlation. Chemical Engineering Science, 2008, 63, 3069-3080.	3.8	60
27	Heat of Absorption of CO₂ in Phase Change Solvents: 2-(Diethylamino)ethanol and 3-(Methylamino)propylamine. Journal of Chemical & Engineering Data, 2013, 58, 1974-1988.	1.9	60
28	Approach to Improve Speed of Sound Calculation within PC-SAFT Framework. Industrial & Engineering Chemistry Research, 2012, 51, 14903-14914.	3.7	58
29	Comparison of two electrolyte models for the carbon capture with aqueous ammonia. International Journal of Greenhouse Gas Control, 2012, 8, 61-72.	4.6	53
30	Inhibition of Methane Hydrate Formation by Ice-Structuring Proteins. Industrial & Engineering Chemistry Research, 2010, 49, 1486-1492.	3.7	52
31	Modeling of Dielectric Properties of Complex Fluids with an Equation of State. Journal of Physical Chemistry B, 2013, 117, 3389-3397.	2.6	52
32	Evaluating the impact of an ammonia-based post-combustion CO2 capture process on a steam power plant with different cooling water temperatures. International Journal of Greenhouse Gas Control, 2012, 10, 1-14.	4.6	50
33	Phase equilibrium modeling of gas hydrate systems for CO2 capture. Journal of Chemical Thermodynamics, 2012, 48, 13-27.	2.0	50
34	Simulation and optimization of fractional crystallization processes. Chemical Engineering Science, 1998, 53, 1551-1564.	3.8	49
35	Thermodynamic Analysis of Chalkâ€“Brineâ€“Oil Interactions. Energy & Fuels, 2017, 31, 11773-11782.	5.1	49
36	Thermodynamic promotion of carbon dioxideâ€“clathrate hydrate formation by tetrahydrofuran, cyclopentane and their mixtures. International Journal of Greenhouse Gas Control, 2013, 17, 397-410.	4.6	46

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37	Measuring and modelling of the combined thermodynamic promoting effect of tetrahydrofuran and cyclopentane on carbon dioxide hydrates. Fluid Phase Equilibria, 2014, 381, 20-27.	2.5	45
38	Absorber Model for CO₂ Capture by Monoethanolamine. Industrial & Engineering Chemistry Research, 2010, 49, 3751-3759.	3.7	43
39	Heat of Absorption of CO2 in Aqueous Solutions of DEEA, MAPA and their Mixture. Energy Procedia, 2013, 37, 1532-1542.	1.8	43
40	Prediction of the vaporâ€“liquid equilibria and speed of sound in binary systems of 1-alkanols and n-alkanes with the simplified PC-SAFT equation of state. Fluid Phase Equilibria, 2013, 360, 222-232.	2.5	42
41	Low energy recycling of ionic liquids via freeze crystallization during cellulose spinning. Green Chemistry, 2018, 20, 493-501.	9.0	41
42	On petroleum fluid characterization with the PC-SAFT equation of state. Fluid Phase Equilibria, 2014, 375, 254-268.	2.5	38
43	Reverse Schreinemakers Method for Experimental Analysis of Mixed-Solvent Electrolyte Systems. Journal of Solution Chemistry, 2009, 38, 1-14.	1.2	35
44	Thermodynamic modeling of liquidâ€“liquid phase change solvents for CO 2 capture. International Journal of Greenhouse Gas Control, 2016, 53, 401-424.	4.6	31
45	Thermodynamic modeling of CO2 absorption in aqueous N-Methyldiethanolamine using Extended UNIQUAC model. Fuel, 2015, 144, 295-306.	6.4	30
46	Modeling of heavy metal salt solubility using the extended UNIQUAC model. AICHE Journal, 2002, 48, 2664-2689.	3.6	29
47	Vaporâ€“liquidâ€“solid equilibria of sulfur dioxide in aqueous electrolyte solutions. Chemical Engineering Science, 2000, 55, 2663-2671.	3.8	28
48	A Review of Electrolyte Equations of State with Emphasis on Those Based on Cubic and Cubic-Plus-Association (CPA) Models. International Journal of Thermophysics, 2022, 43, 1.	2.1	28
49	Modeling of Vaporâ^'Liquidâ^'Solid Equilibria in Acidic Aqueous Solutions. Industrial & Engineering Chemistry Research, 2003, 42, 4260-4268.	3.7	27
50	A Layout for the Carbon Capture with Aqueous Ammonia without Salt Precipitation. Energy Procedia, 2016, 86, 134-143.	1.8	27
51	eCPA: An ion-specific approach to parametrization. Fluid Phase Equilibria, 2018, 470, 176-187.	2.5	27
52	CO2 capture using aqueous ammonia: kinetic study and process simulation. Energy Procedia, 2011, 4, 1443-1450.	1.8	26
53	Aqueous Solubility of Piperazine and 2-Amino-2-methyl-1-propanol plus Their Mixtures Using an Improved Freezing-Point Depression Method. Journal of Chemical & Engineering Data, 2011, 56, 5088-5093.	1.9	25
54	Solids Modelling and Capture Simulation of Piperazine in Potassium Solvents. Energy Procedia, 2013, 37, 844-859.	1.8	25

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55	A new aqueous activity model for geothermal brines in the system Na-K-Ca-Mg-H-Cl-SO4-H2O from 25 to 300Â°C. Chemical Geology, 2014, 381, 78-93.	3.3	24
56	A Low Energy Aqueous Ammonia CO2 Capture Process. Energy Procedia, 2014, 63, 614-623.	1.8	22
57	Modeling the liquidâ€“liquid equilibrium of petroleum fluid and polar compounds containing systems with the PC-SAFT equation of state. Fluid Phase Equilibria, 2015, 406, 147-155.	2.5	22
58	A group contribution-based prediction method for the electrical conductivity of ionic liquids. Fluid Phase Equilibria, 2020, 509, 112462.	2.5	22
59	Freezing Point Depressions of Aqueous MEA, MDEA, and MEAâ^'MDEA Measured with a New Apparatus. Journal of Chemical & Engineering Data, 2011, 56, 995-1000.	1.9	21
60	Alternative Layouts for the Carbon Capture with the Chilled Ammonia Process. Energy Procedia, 2013, 37, 2076-2083.	1.8	21
61	Thermodynamic and kinetic properties of NH3-K2CO3-CO2-H2O system for carbon capture applications. International Journal of Greenhouse Gas Control, 2019, 85, 121-131.	4.6	21
62	Comparison of activity coefficient models for electrolyte systems. AICHE Journal, 2010, 56, 1334-1351.	3.6	20
63	Modelling of tetrahydrofuran promoted gas hydrate systems for carbon dioxide capture processes. Fluid Phase Equilibria, 2014, 375, 45-65.	2.5	20
64	Modeling of the Mixed Solvent Electrolyte System CO₂â^'Na₂CO₃â^'NaHCO₃â^'Monoethylene Glycolâ^'Water. Industrial & Engineering Chemistry Research, 2009, 48, 4565-4578.	3.7	19
65	Thermodynamic modeling of hydrogen sulfide absorption by aqueous N-methyldiethanolamine using the Extended UNIQUAC model. Fluid Phase Equilibria, 2015, 392, 24-32.	2.5	19
66	Modelling of cyclopentane promoted gas hydrate systems for carbon dioxide capture processes. Fluid Phase Equilibria, 2014, 375, 89-103.	2.5	18
67	Thermodynamic modelling of acid gas removal from natural gas using the Extended UNIQUAC model. Fluid Phase Equilibria, 2017, 442, 38-43.	2.5	18
68	Vaporâ^'Liquid Equilibrium Measurements and Modeling of the Propyl Mercaptan + Methane + Water System. Journal of Chemical & Engineering Data, 2010, 55, 842-846.	1.9	17
69	Dynamic Operation and Simulation of Post-Combustion CO2 Capture. Energy Procedia, 2016, 86, 205-214.	1.8	17
70	Simultaneous Description of Activity Coefficients and Solubility with eCPA. Industrial & Engineering Chemistry Research, 2017, 56, 1074-1089.	3.7	17
71	Freezing Point Depressions of Phase Change CO₂ Solvents. Journal of Chemical & Engineering Data, 2013, 58, 1918-1926.	1.9	15
72	Solubility of hydrogen sulfide in aqueous solutions of N-methyldiethanolamine at high pressures. Fluid Phase Equilibria, 2015, 393, 33-39.	2.5	14

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73	Solubility Measurements in the Mixed Solvent Electrolyte System Na₂CO₃â^'NaHCO₃â^'Monoethylene Glycolâ^'Water. Industrial & Engineering Chemistry Research, 2009, 48, 2218-2228.	3.7	13
74	Equilibrium Solubility of CO2 in Alkanolamines. Energy Procedia, 2014, 51, 217-223.	1.8	13
75	Modeling of Dissolution Effects on Waterflooding. Transport in Porous Media, 2015, 106, 545-562.	2.6	13
76	Solid Formation in Piperazine Rate-based Simulation. Energy Procedia, 2014, 63, 1074-1083.	1.8	12
77	Comparative analysis of experimental methods for quantification of small amounts of oil in water. Journal of Petroleum Science and Engineering, 2016, 147, 459-467.	4.2	12
78	Results from Process Modeling of the Mixed-salt Technology for CO2 Capture from Post-combustion-related Applications. Energy Procedia, 2017, 114, 771-780.	1.8	12
79	Freezing Point Determination of Waterâ€"Ionic Liquid Mixtures. Journal of Chemical & Engineering Data, 2017, 62, 2374-2383.	1.9	12
80	Application of the cubic-plus-association (CPA) equation of state to model the fluid phase behaviour of binary mixtures of water and tetrahydrofuran. Fluid Phase Equilibria, 2013, 356, 209-222.	2.5	11
81	Thermodynamic modeling of the solubility of CO2 in aqueous alkanolamine solutions using the extended UNIQUAC model application to monoethanolamine and methyldiethanolamine. Energy Procedia, 2009, 1, 861-867.	1.8	10
82	Modeling the binary system Mn(NO3)2â€"H2O with the extended universal quasichemical (UNIQUAC) model. Fluid Phase Equilibria, 2015, 397, 126-130.	2.5	9
83	Experimental study of the aqueous CO2-NH3 rate of reaction for temperatures from 15â€Â°C to 35â€Â°C, NH3 concentrations from 5% to 15% and CO2 loadings from 0.2 to 0.6. International Journal of Greenhouse Gas Control, 2018, 70, 117-127.	4.6	9
84	Brine Crude Oil Interactions at the Oil-Water Interface. , 2015, , .		8
85	Multivariable Optimization of the Piperazine CO2 Post-Combustion Process. Energy Procedia, 2016, 86, 229-238.	1.8	8
86	Synthesis and analysis of processes with electrolyte mixtures. Computers and Chemical Engineering, 1995, 19, 27-32.	3.8	7
87	CO2 Capture with Liquid-Liquid Phase Change Solvents: A Thermodynamic Study. Energy Procedia, 2017, 114, 1671-1681.	1.8	7
88	Determination of Zinc Sulfide Solubility to High Temperatures. Journal of Solution Chemistry, 2017, 46, 1805-1817.	1.2	7
89	Solubility and Freezing Points of Disodium Terephthalate in Waterâ€"Ethylene Glycol Mixtures. Journal of Chemical & Engineering Data, 2021, 66, 2143-2152.	1.9	7
90	Formation of robust CEI film on high voltage LiNi0.6Co0.2Mn0.2O2 cathode enabled by functional [PIVM][TFSA] ionic liquid additive. Electrochimica Acta, 2022, 424, 140679.	5.2	7

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91	Rate-based Modelling and Validation of a Pilot Absorber Using MDEA Enhanced with Carbonic Anhydrase (CA). Energy Procedia, 2017, 114, 707-718.	1.8	6
92	Design and Simulation of Rate-based CO2 Capture Processes Using Carbonic Anhydrase (CA) Applied to Biogas. Energy Procedia, 2017, 114, 1434-1443.	1.8	6
93	Density, Viscosity, and Conductivity of [VAIM][TFSI] in Mixtures for Lithium-Ion Battery Electrolytes. Journal of Chemical & Engineering Data, 2020, 65, 495-502.	1.9	6
94	Experimental measurement and modeling of the distribution of solvent and ions between an aqueous phase and an ion exchange resin. Fluid Phase Equilibria, 2005, 228-229, 247-260.	2.5	5
95	Solidâ€“liquid equilibria for binary and ternary systems with the Cubic-Plus-Association (CPA) equation of state. Fluid Phase Equilibria, 2010, 293, 121-129.	2.5	5
96	Interactions of Fines with Base Fractions of Oil and its Implication in Smart Water Flooding. , 2015, , .		4
97	Determining Optimum Aging Time Using Novel Core Flooding Equipment. , 2016, , .		4
98	Kinetic study of a Layout for the Carbon Capture with Aqueous Ammonia without Salt Precipitation. Energy Procedia, 2017, 114, 1352-1359.	1.8	4
99	Water-Oil Emulsions with Fines in Smart Water Enhanced Oil Recovery. , 2017, , .		4
100	Review of barium sulphate solubility measurements. Geothermics, 2022, 104, 102465.	3.4	4
101	Importance of Fines in Smart Water Enhanced Oil Recovery (SmW-EOR) for Chalk Outcrops. , 2015, , .		3
102	Solubility Modeling of the Binary Systems Fe(NO3)3â€“H2O, Co(NO3)2â€“H2O and the Ternary System Fe(NO3)3â€“Co(NO3)2â€“H2O with the Extended Universal Quasichemical (UNIQUAC) Model. Journal of Solution Chemistry, 2016, 45, 534-545.	1.2	3
103	Comparison of the Kinetic Promoter Piperazine and Carbonic Anhydrase for CO2 Absorption. Energy Procedia, 2017, 114, 719-725.	1.8	3
104	Measurement of iron and lead sulfide solubility below 100â€Â°C. Fluid Phase Equilibria, 2018, 475, 118-126.	2.5	3
105	Solidâ€“Liquid Equilibrium and Binodal Curves for Aqueous Solutions of NH3, NH4HCO3, MDEA, and K2CO3. Journal of Chemical & Engineering Data, 2021, 66, 3038-3046.	1.9	3
106	Modeling vapor-liquid-liquid-solid equilibrium for acetone-water-salt system. Pure and Applied Chemistry, 2020, 92, 1663-1672.	1.9	3
107	Computer-Aided Multifunctional Ionic Liquid Design for the Electrolyte in LTO Rechargeable Batteries. Journal of Physical Chemistry C, 2022, 126, 11498-11509.	3.1	3
108	Solubility Modeling of the Systems Ni(NO3)2â€“H2O and Fe(NO3)3â€“Ni(NO3)2â€“H2O with the Extended Universal Quasichemical (UNIQUAC) Model. Journal of Solution Chemistry, 2017, 46, 1220-1229.	1.2	2

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109	Solubility of NaHCO₃ in Systems of Aqueous Glycols (Monoethylene Glycol, Diethylene) Tj ETQq1 1 0.784314 rgBT /Overlo & Engineering Data, 2021, 66, 222-233.	1.9	2
110	SOLID-LIQUID EQUILIBRIA FOR THE BINARY MIXTURES 1,4-XYLENE+ETHYLBENZENE AND 1,4-XYLENE+TOLUENE. Chemical Engineering Communications, 2004, 191, 1017-1023.	2.6	1
111	Inhibition of Gas Hydrate Formation by Low-dosage, Environmentally Benign Inhibitors. , 2010, , 445-453.		1
112	Experimental data of the aqueous NH3 and CO2 absorption at temperatures from 15â€¯Â°C to 35â€¯Â°C, NH3 concentrations from 5% to 15% and CO2 loadings from 0.2 to 0.6 measured with the Wetted Wall Column. Data in Brief, 2018, 17, 1240-1244.	1.0	1
113	A simple model for estimating hydrogen sulfide solubility in aqueous alkanolamines in the high pressure-high gas loading region. Journal of Sulfur Chemistry, 2021, 42, 410-425.	2.0	1
114	Solidâ€“Liquid Phase Boundaries in the System: Glycineâ€“NaOHâ€“NaHCO₃â€“H₂O. Journal of Chemical & Engineering Data, 2022, 67, 1550-1564.	1.9	1
115	Significance of Fines and their Correlation to Reported Oil Recovery. , 2015, , .		0
116	Fine Formation During Brine-Crude Oil-Calcite Interaction in Smart Water Enhanced Oil Recovery for Caspian Carbonates. , 2015, , .		0
117	Formation of Anhydrite Due to Interaction Between Water Soluble CO2(aq) and Calcite Mineral During Enhanced Oil Recovery. , 2015, , .		0
118	Prediction and Experimental Determination of the Solubility of Exotic Scales at High Temperatures - Zinc Sulfide. , 2016, , .		0
119	Modelling of the terephthalic acid - disodium terephthalate - sodium chloride - sodium hydroxide - ethylene glycol â€“ water system. Fluid Phase Equilibria, 2022, 561, 113524.	2.5	0