

Ilya Polishuk

List of Publications by Year in descending order

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97
papers

1,889
citations

218592

26
h-index

315616

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98
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98
docs citations

98
times ranked

631
citing authors

#	ARTICLE	IF	CITATIONS
1	Prediction of sound velocity for selected ionic liquids using a multilayer feed-forward neural network. <i>Journal of Molecular Liquids</i> , 2022, 347, 118376.	2.3	8
2	Interfacial properties of fluorinated (F)-gases in azeotropic condition. <i>Journal of Molecular Liquids</i> , 2022, 350, 118604.	2.3	6
3	Measurements and predictions of densities and viscosities in CO ₂ +hydrocarbon mixtures at high pressures and temperatures: CO ₂ +n-pentane and CO ₂ +n-hexane blends. <i>Journal of Molecular Liquids</i> , 2022, 360, 119518.	2.3	4
4	Surface anomalies in ethanol plus n-octane mixture: An effect of molecular orientations and hydrogen bonds. <i>Journal of Molecular Liquids</i> , 2022, 361, 119630.	2.3	2
5	Implementation of CP-PC-SAFT and CS-SAFT-VR-Mie for Predicting Thermodynamic Properties of C ₁ -C ₃ Halocarbon Systems. I. Pure Compounds and Mixtures with Nonassociating Compounds. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 9624-9636.	1.8	12
6	Reference materials for phase equilibrium studies. 1. Liquid-liquid equilibria (IUPAC Technical Report). <i>Pure and Applied Chemistry</i> , 2021, 93, 811-827.	0.9	3
7	Implementation of CP-PC-SAFT and CS-SAFT-VR-Mie for Predicting the Thermodynamic Properties of C ₁ -C ₃ Halocarbon Systems. II. Inter-Relation between Solubilities in Ionic Liquids, Their Pressure, Volume, and Temperature, and Critical Constants. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 13084-13093.	1.8	17
8	Interfacial properties of hydrogen-methane system from inhomogeneous fluid theories. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 39719-39727.	3.8	2
9	Comparison of CP-PC-SAFT and SAFT-VR-Mie in Predicting Phase Equilibria of Binary Systems Comprising Gases and 1-Alkyl-3-methylimidazolium Ionic Liquids. <i>Molecules</i> , 2021, 26, 6621.	1.7	9
10	Comparison of SAFT-VR-Mie and CP-PC-SAFT in Estimating the Phase Behavior of Acetone + n-Alkane Systems. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 21567-21578.	1.8	6
11	Estimation of Thermodynamic Properties and Phase Equilibria in Systems of Deep Eutectic Solvents by PC-SAFT EoS. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 22292-22300.	1.8	21
12	Effect of size disparity on the gas-liquid interfacial properties of Lennard-Jones monomer plus dimer mixtures. <i>Journal of Molecular Liquids</i> , 2020, 311, 113280.	2.3	0
13	Wide-ranging prediction of phase behavior in complex systems by CP-PC-SAFT with universal kij values. I. Mixtures of non-associating compounds with [C ₂ mim][EtSO ₄], [C ₄ mim][MeSO ₄], and [C ₂ mim][MeSO ₃] ionic liquids. <i>Journal of Molecular Liquids</i> , 2020, 310, 113266.	2.3	13
14	Speeds of sound in ionic liquids under elevated pressures. New experimental data and CP-PC-SAFT modelling. <i>Journal of Molecular Liquids</i> , 2020, 303, 112669.	2.3	15
15	Measurements and modeling of the VLE properties of n-hexadecane in supercritical binary propane+n-butane solvent. <i>Fluid Phase Equilibria</i> , 2020, 510, 112502.	1.4	16
16	Comparison of SAFT-VR-Mie and CP-PC-SAFT in predicting phase behavior of associating systems IV. Methanol-aliphatic hydrocarbons. <i>Journal of Molecular Liquids</i> , 2019, 291, 111321.	2.3	10
17	Viscosities of 1-Iodoalkanes. New Experimental Data, Prediction, and Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 20116-20124.	1.8	6
18	Second-Order Differential Accelerators Based on the Geometry of Equilibrium for Thermodynamic Calculations. Part I. Pure Fluids. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 20838-20846.	1.8	3

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19	Comparison of SAFT-VR-Mie and CP-PC-SAFT in predicting phase behavior of associating systems III. Aliphatic hydrocarbons - 1-propanol, 1-butanol and 1-pentanol. <i>Journal of Molecular Liquids</i> , 2019, 279, 492-502.	2.3	12
20	Thermophysical Properties of the Medium-Chain 1-Alkyl Halides in a Wide Range of Conditions: New Experimental Data and Predictions of CP-PC-SAFT and FT-EOS. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 5725-5732.	1.8	6
21	The additivity of surface and volumetric properties of $\text{C}_2\text{H}_2\text{X}_2$ -dihaloalkanes. <i>Journal of Chemical Thermodynamics</i> , 2019, 132, 222-228.	1.0	2
22	Experimental Determination and Modeling Thermophysical Properties of 1-Chlorononane in a Wide Range of Conditions: Is It Possible To Predict a Contribution of Chlorine Atom?. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 5142-5150.	1.8	13
23	Some Observations Regarding the Association Kernel of SAFT-VR-Mie. Is the Molecularly Inspired Contribution Always Necessary?. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 15869-15883.	1.8	7
24	Comparison of SAFT-VR-Mie and CP-PC-SAFT in predicting phase behavior of associating systems I. Ammonia-water, methanol, ethanol and hydrazine. <i>Journal of Molecular Liquids</i> , 2018, 265, 639-653.	2.3	14
25	Comparison of SAFT-VR-Mie and CP-PC-SAFT in predicting phase behavior of associating systems II. Ammonia-Hydrocarbons. <i>Journal of Molecular Liquids</i> , 2018, 269, 657-665.	2.3	13
26	Toward Development of a Universal CP-PC-SAFT-Based Modeling Framework for Predicting Thermophysical Properties at Reservoir Conditions: Inclusion of Surface Tensions. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 8819-8831.	1.8	25
27	Predicting phase behavior in aqueous systems without fitting binary parameters I: CP-SAFT EOS, aromatic compounds. <i>AIChE Journal</i> , 2017, 63, 4124-4135.	1.8	33
28	Predicting phase behavior of metallic mercury in liquid and compressed gaseous hydrocarbons II: Further examination of CP-PC-SAFT in the light of new data. <i>Fuel</i> , 2017, 203, 686-689.	3.4	11
29	Implementation of CP-PC-SAFT for Predicting Thermodynamic Properties and Gas Solubility in 1-Alkyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide Ionic Liquids without Fitting Binary Parameters. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 7845-7857.	1.8	38
30	Predicting phase behavior in aqueous systems without fitting binary parameters II: Gases and non-aromatic hydrocarbons. <i>AIChE Journal</i> , 2017, 63, 5064-5075.	1.8	26
31	Implementation of GC-PPC-SAFT and CP-PC-SAFT for predicting thermodynamic properties of mixtures of weakly- and non-associated oxygenated compounds. <i>Journal of Supercritical Fluids</i> , 2016, 115, 65-78.	1.6	31
32	Predicting phase behavior of metallic mercury in liquid and compressed gaseous hydrocarbons. <i>Fuel</i> , 2016, 174, 197-205.	3.4	19
33	The group contribution method (GC) versus the critical point-based approach (CP): Predicting thermodynamic properties of weakly- and non-associated oxygenated compounds by GC-PPC-SAFT and CP-PC-SAFT. <i>Journal of Supercritical Fluids</i> , 2016, 110, 11-21.	1.6	37
34	High-pressure phase equilibrium in the {carbon dioxide (1) + 1-chloropropane (2)} binary system. <i>Journal of Chemical Thermodynamics</i> , 2015, 91, 165-171.	1.0	14
35	Estimating the liquid properties of 1-alkanols from C5 to C12 by FT-EoS and CP-PC-SAFT: Simplicity versus complexity. <i>Journal of Supercritical Fluids</i> , 2015, 104, 193-203.	1.6	27
36	A Modeling Framework for Predicting and Correlating Viscosities of Liquids in Wide Range of Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 6999-7003.	1.8	23

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37	Thermodynamic Properties of 1,2-Dichloroethane and 1,2-Dibromoethane under Elevated Pressures: Experimental Results and Predictions of a Novel DIPPR-Based Version of FT-EoS, PC-SAFT, and CP-PC-SAFT. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 9645-9656.	1.8	31
38	Implementation of the critical point-based revised PC-SAFT for modelling thermodynamic properties of aromatic and haloaromatic compounds. <i>Journal of Supercritical Fluids</i> , 2015, 97, 133-144.	1.6	25
39	Modeling Viscosities of Pure Compounds and Their Binary Mixtures Using the Modified Yarranton-Satyro Correlation and Free Volume Theory Coupled with SAFT+Cubic EoS. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 959-971.	1.8	29
40	Standardized Critical Point-Based Numerical Solution of Statistical Association Fluid Theory Parameters: The Perturbed Chain-Statistical Association Fluid Theory Equation of State Revisited. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 14127-14141.	1.8	99
41	Novel Methodology for Analysis and Evaluation of SAFT-Type Equations of State. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 13875-13885.	1.8	51
42	Implementation of PC-SAFT and SAFT+Cubic for modeling thermodynamic properties of haloalkanes. II. 7 Haloethanes and their mixtures. <i>International Journal of Refrigeration</i> , 2013, 36, 980-991.	1.8	21
43	Implementation of Perturbed-Chain Statistical Associating Fluid Theory (PC-SAFT), Generalized (G)SAFT+Cubic, and Cubic-Plus-Association (CPA) for Modeling Thermophysical Properties of Selected 1-Alkyl-3-methylimidazolium Ionic Liquids in a Wide Pressure Range. <i>Journal of Physical Chemistry A</i> , 2013, 117, 2223-2232.	1.1	38
44	Implementation of PC-SAFT and SAFT+Cubic for modeling thermodynamic properties of eight 1-alkenes and their mixtures. <i>Journal of Chemical Thermodynamics</i> , 2012, 54, 155-164.	1.0	14
45	Modeling of Viscosities in Extended Pressure Range Using SAFT + Cubic EoS and Modified Yarranton-Satyro Correlation. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 13527-13537.	1.8	39
46	Implementation of PC-SAFT and SAFT+Cubic for modeling thermodynamic properties of haloalkanes. I. 11 halomethanes. <i>Fluid Phase Equilibria</i> , 2012, 316, 66-73.	1.4	33
47	Implementation of SAFT+Cubic and PC-SAFT for comprehensive description of thermodynamic properties of n-octane and its mixtures. <i>Journal of Supercritical Fluids</i> , 2012, 62, 47-54.	1.6	15
48	Generalization of SAFT+Cubic equation of state for predicting and correlating thermodynamic properties of heavy organic substances. <i>Journal of Supercritical Fluids</i> , 2012, 67, 94-107.	1.6	31
49	Implementation of SAFT + Cubic, PC-SAFT, and Soave-Benedict-Webb-Rubin Equations of State for Comprehensive Description of Thermodynamic Properties in Binary and Ternary Mixtures of CH ₄ , CO ₂ , and n-C ₁₆ H ₃₄ . <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 14175-14185.	1.8	21
50	Hybridizing SAFT and Cubic EOS: What Can Be Achieved?. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 4183-4198.	1.8	65
51	Semi-Theoretical Versus Entirely Empirical: Comparing SAFT + Cubic and Soave-Benedict-Webb-Rubin (SBWR) Equations of State. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 11422-11431.	1.8	21
52	Addressing the issue of numerical pitfalls characteristic for SAFT EOS models. <i>Fluid Phase Equilibria</i> , 2011, 301, 123-129.	1.4	50
53	Till which pressures the fluid phase EOS models might stay reliable?. <i>Journal of Supercritical Fluids</i> , 2011, 58, 204-215.	1.6	46
54	The numerical challenges of SAFT EoS models. <i>Reviews in Chemical Engineering</i> , 2011, 27, .	2.3	34

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55	Some Observations Regarding the SAFT-VR-Mie Equation of State. <i>The Open Thermodynamics Journal</i> , 2011, 5, 18-28.	0.6	7
56	About the physical validity of attaching the repulsive terms of analytical EOS models by temperature dependencies. <i>Fluid Phase Equilibria</i> , 2010, 293, 164-167.	1.4	41
57	About the numerical pitfalls characteristic for SAFT EOS models. <i>Fluid Phase Equilibria</i> , 2010, 298, 67-74.	1.4	67
58	Prediction of phase equilibria in the systems carbon dioxide (1)–fatty acids (2) by two cubic EOS models and classical mixing rules without binary adjustable parameters. <i>Fluid Phase Equilibria</i> , 2010, 289, 90-93.	1.4	6
59	An Empirical Modification of Classical Mixing Rule for the Cohesive Parameter: The Triple Interactions in Binary Systems Considered. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 4989-4994.	1.8	8
60	Limiting conditions for the critical pressure step point behavior in the Global Phase Diagram of binary mixtures composed by spherical molecules of equal sizes. <i>Journal of Supercritical Fluids</i> , 2009, 48, 108-119.	1.6	10
61	Some observations regarding the prediction of isochoric heat capacities by engineering EOS models. <i>Fluid Phase Equilibria</i> , 2009, 277, 121-125.	1.4	5
62	Generalized Cubic Equation of State Adjusted to the Virial Coefficients of Real Gases and Its Prediction of Auxiliary Thermodynamic Properties. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 10708-10717.	1.8	22
63	Comments on “Joule–Thomson Inversion Curves and Third Virial Coefficients for Pure Fluids from Molecular-Based Models” and “Predicted Inversion Curve and Third Virial Coefficients of Carbon Dioxide at High Temperatures”. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 6901-6903.	1.8	2
64	IMPLEMENTATION OF MATHEMATICA FOR DEVELOPMENT AND APPLICATION OF EOS MODELS. III: CALCULATION OF HEAT CAPACITIES, ENTHALPY AND ENTROPY OF EVAPORATION, AND SPEED OF SOUND. <i>Chemical Engineering Communications</i> , 2009, 196, 1291-1299.	1.5	3
65	IMPLEMENTATION OF MATHEMATICA FOR DEVELOPMENT AND APPLICATION OF EOS MODELS. II: DERIVATION OF THE GENERALIZED EXPRESSION FOR THE FUGACITY COEFFICIENTS OF COMPOUNDS IN A MIXTURE. <i>Chemical Engineering Communications</i> , 2008, 196, 448-453.	1.5	4
66	IMPLEMENTATION OF MATHEMATICA FOR DEVELOPMENT AND APPLICATION OF EOS MODELS. I: DERIVATION OF THE EXPRESSIONS FOR HARD-CHAIN AND HARD-SPHERE COMPRESSIBILITY FACTORS. <i>Chemical Engineering Communications</i> , 2008, 196, 443-447.	1.5	4
67	Novel Four-Parameter EOS with Temperature-Independent Parameters. <i>Industrial & Engineering Chemistry Research</i> , 2007, 46, 9248-9256.	1.8	4
68	Azeotropic behavior of Dieterici binary fluids. <i>Fluid Phase Equilibria</i> , 2007, 257, 18-26.	1.4	5
69	Association and molecular chain length effects on interfacial behavior. <i>Physics and Chemistry of Liquids</i> , 2006, 44, 45-59.	0.4	18
70	Simultaneous Prediction of the Critical and Subcritical Phase Behavior in Mixtures of Perfluoromethane (1)–Alkanes (2). <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 6765-6769.	1.8	2
71	Comments on “VLE predictions with the Peng–Robinson equation of state and temperature dependent k_{ij} calculated through a group contribution method” by J.-N. Jaubert and F. Mutelet [<i>Fluid Phase Equilibria</i> , 224 (2004) 285–304]. <i>Fluid Phase Equilibria</i> , 2006, 249, 198-199.	1.4	1
72	A novel EOS that combines van der Waals and Dieterici potentials. <i>AIChE Journal</i> , 2005, 51, 2077-2088.	1.8	5

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73	Correlation and prediction of interface tension for fluid mixtures: An approach based on cubic equations of state with the wong-sandler mixing rule. <i>Journal of Phase Equilibria and Diffusion</i> , 2005, 26, 215-224.	0.5	29
74	Simultaneous Prediction of the Critical and Subcritical Phase Behavior in Mixtures of Ethane ⁿ -Alkanes. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 2292-2300.	1.8	3
75	A Novel Equation of State for the Prediction of Thermodynamic Properties of Fluids. <i>Journal of Physical Chemistry B</i> , 2005, 109, 5977-5984.	1.2	13
76	Correlation and Prediction of Interface Tension for Fluid Mixtures: An Approach Based on Cubic Equations of State with the Wong-Sandler Mixing Rule. <i>Journal of Phase Equilibria and Diffusion</i> , 2005, 26, 215-224.	0.5	0
77	Simultaneous prediction of the critical and sub-critical phase behavior in mixtures using equations of state IV. Mixtures of chained n-alkanes. <i>Chemical Engineering Science</i> , 2004, 59, 633-643.	1.9	6
78	Estimation of interfacial behavior using the global phase diagram approach I. Carbon dioxide ⁿ -alkanes. <i>Thermochimica Acta</i> , 2004, 411, 171-176.	1.2	25
79	Phase behavior of Dieterici fluids. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 5189-5194.	1.3	10
80	Estimation of Liquid ⁿ -Liquid ⁿ -Vapor Equilibria in Binary Mixtures of n-Alkanes. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 5957-5964.	1.8	14
81	Rebuttal to the Comments of Paul M. Mathias on "Unnoticed Pitfalls of Soave-Type Alpha Functions in Cubic Equations of State". <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 1895-1896.	1.8	10
82	Simultaneous prediction of the critical and sub-critical phase behavior in mixtures using equations of state II. Carbon dioxide ⁿ -heavy n-alkanes. <i>Chemical Engineering Science</i> , 2003, 58, 2529-2550.	1.9	42
83	Simultaneous prediction of the critical and sub-critical phase behavior in mixtures using equations of state III. Methane ⁿ -n-alkanes. <i>Chemical Engineering Science</i> , 2003, 58, 4363-4376.	1.9	8
84	Estimation of Liquid ⁿ -Liquid ⁿ -Vapor Equilibria Using Predictive EOS Models. 1. Carbon Dioxide ⁿ -n-Alkanes. <i>Journal of Physical Chemistry B</i> , 2003, 107, 1864-1874.	1.2	24
85	Unnoticed Pitfalls of Soave-Type Alpha Functions in Cubic Equations of State. <i>Industrial & Engineering Chemistry Research</i> , 2003, 42, 5662-5673.	1.8	71
86	Estimation of phase behavior in mixtures of CO ₂ and C ₂₀ +n-alkanes using predictive eos models. <i>Physics and Chemistry of Liquids</i> , 2003, 41, 623-637.	0.4	4
87	Comments on "Development of a Universal Group Contribution Equation of State. 2. Prediction of Vapor ⁿ -Liquid Equilibria for Asymmetric Systems" by Jens Ahlers and Jürgen Gmehling [<i>Ind. Eng. Chem. Res.</i> 2002, 41, 3489-3498]. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 6634-6634.	1.8	0
88	About the Relation between the Empirical and the Theoretically Based Parts of van der Waals-like Equations of State. <i>Industrial & Engineering Chemistry Research</i> , 2002, 41, 4414-4421.	1.8	11
89	Closed loops of liquid ⁿ -liquid immiscibility predicted by semi-empirical cubic equations of state and classical mixing rules. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 879-883.	1.3	15
90	Prediction of High ⁿ -Pressure Phase Equilibria using Cubic EOS: What Can Be Learned?. <i>Canadian Journal of Chemical Engineering</i> , 2002, 80, 927-942.	0.9	18

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91	Simultaneous prediction of the critical and sub-critical phase behavior in mixtures using equation of state I. Carbon dioxide-alkanols. <i>Chemical Engineering Science</i> , 2001, 56, 6485-6510.	1.9	68
92	Phase Stability Analysis in Binary Systems. <i>Physics and Chemistry of Liquids</i> , 2000, 38, 277-331.	0.4	12
93	A novel approach for defining parameters in a four-parameter EOS. <i>Chemical Engineering Science</i> , 2000, 55, 5705-5720.	1.9	25
94	Prediction of the critical locus in binary mixtures using equation of state. <i>Fluid Phase Equilibria</i> , 2000, 172, 1-26.	1.4	46
95	Prediction of the critical locus in binary mixtures using equation of state. <i>Fluid Phase Equilibria</i> , 1999, 164, 13-47.	1.4	40
96	Transitional behavior of phase diagrams predicted by the Redlich-Kwong equation of state and classical mixing rules. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 4245-4250.	1.3	12
97	Comparison of CP-PC-SAFT and PC-SAFT with $k_{12} = 0$ and PPR78 in Predicting Binary Systems of Hydrocarbons with Squalane, n-dodecylbenzene, cis-decalin, Tetralin, and Naphthalene at High Pressures. <i>Industrial & Engineering Chemistry Research</i> , 0, , .	1.8	2