

ON THE COVER: The images shown on the cover were taken from papers in this issue: (top left) Excess molar volumes for *o*-chlorotoluene (1) + tetrahydrofuran (2) + toluene (3) ternary mixture at 298.15 K (see DOI: 10.1021/je5004719). (top right) Excess molar volumes for binary mixtures of [BMIM][FAP] + protic amides showing positive values in the entire concentration range (see DOI: 10.1021/je5002945). (middle) Anion–anion, anion–cation, and anion–HBD center of mass radial distribution function for ethaline (see DOI: 10.1021/je500520h). (bottom) Phase diagrams of the NaOH–Al₂O₃–Na₂CrO₄–H₂O system at (120 and 130) °C and in the full NaOH concentration range (see DOI: 10.1021/je500485b).

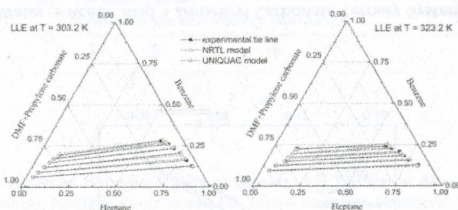
Articles

3307



DOI: 10.1021/je500442m

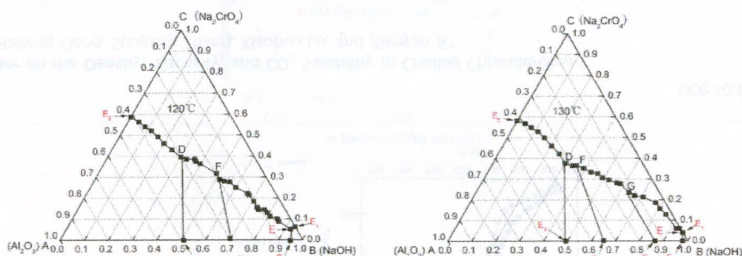
Liquid–Liquid Equilibria for the Systems: Heptane + Benzene + Solvent (Propylene carbonate, *N,N*-Dimethylformamide, or Mixtures) at Temperatures from (303.2 to 323.2) K
 Jing-jing Li,* Qian-shu Zhao, Xiao-dong Tang, Kun-liang Xiao, and Jiao-yang Yuan



3314

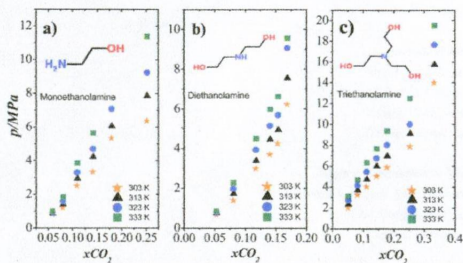
DOI: 10.1021/je500485b

Phase Diagram for the NaOH–Al₂O₃–Na₂CrO₄–H₂O System at (120 and 130) °C
 Huan Liu, Hong-bin Xu,* Bing-zhu Zhang, Ying Tian, Xiao-fei Zhang, Yang Zhang, and Yi Zhang



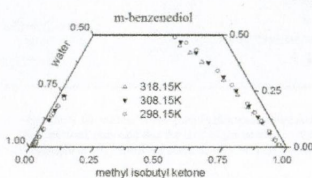
Bubble Point Determination for CO₂ + Ethanol + Alkanolamines (Monoethanolamine, Diethanolamine, or Triethanolamine) at High Pressures

Dival de Brito Guerra-Neto, Leandro Ferreira-Pinto, Willyan Machado Giufrida, Marcelo Santiago Zabaloy, Lúcio Cardozo-Filho, and Osvaldo Chivovone-Filho*



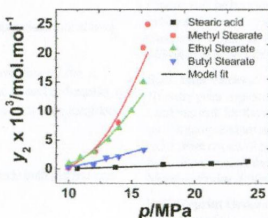
Liquid-Liquid Equilibria for the Ternary System Methyl Isobutyl Ketone + *m*-Benzenediol + Water

Chufen Yang,* Yu Qian, Jianwei Guo, Jingrui Chen, and Jinping Peng



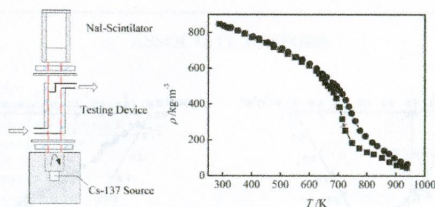
Solubilities of *n*-Butyl Esters in Supercritical Carbon Dioxide

Ram C. Narayan and Giridhar Madras*



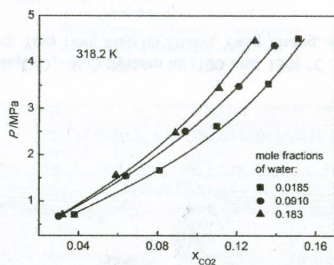
Design of a Gamma Densitometer for Hydrocarbon Fuel at High Temperature and Supercritical Pressure

Zhuqiang Yang, Qincheng Bi,* Yong Guo, Zhaohui Liu, Jianguo Yan, and Qiang Zhang



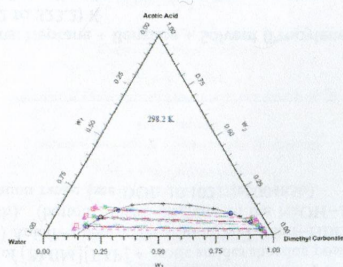
Effect of Water on the Density, Viscosity, and CO₂ Solubility in Choline Chloride/Urea

Yujiao Xie,* Haifeng Dong, Suojiang Zhang, Xiaohua Lu, and Xiaoyan Ji*



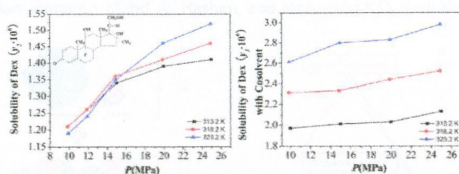
Liquid Phase Equilibria of the Water + Acetic Acid + Dimethyl Carbonate Ternary System at Several Temperatures

Erol Ince,* Melisa Lalikoglu, and Dana Constantinescu



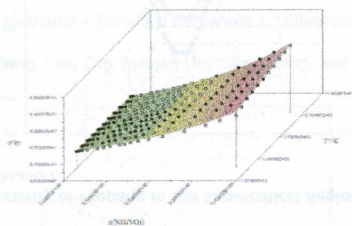
Solubility of Dexamethasone in Supercritical Carbon Dioxide with and without a Cosolvent

Chuan Tang, Yi-Xin Guan,* Shan-Jing Yao, and Zi-Qiang Zhu



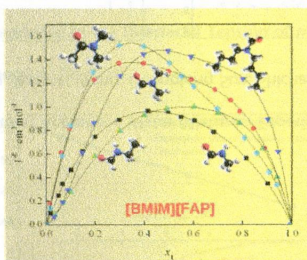
Viscosity of Ammonium Nitrate + Formamide Mixtures

Milan Vraneš, Sanja Dožić, Aleksandar Tot, and Slobodan Gadžurić*

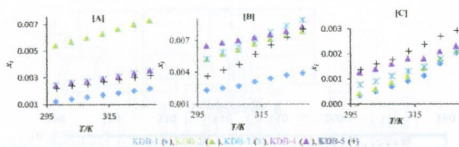


Volumetric Properties of Binary Mixtures of 1-Butyl-3-Methylimidazolium Tris(pentafluoroethyl)trifluorophosphate with *N*-Methylformamide, *N*-Ethylformamide, *N,N*-Dimethylformamide, *N,N*-Dibutylformamide, and *N,N*-Dimethylacetamide from (293.15 to 323.15) K

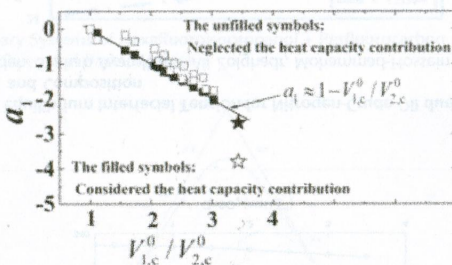
Milan Vraneš, Aleksandar Tot, Nebojša Zec, Snežana Papović, and Slobodan Gadžurić*



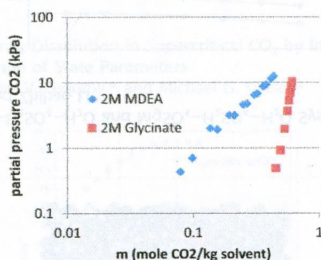
Measurement, Correlation, and Thermodynamics Parameters of Biological Active Pyrimidine Derivatives in Organic Solvents at Different Temperatures
 Kapil Bhesaniya and Shipra Baluja*



Liquid-Liquid Phase Equilibrium and Heat Capacity of Binary Mixture 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide + 1-Propanol
 Mingjie Wang, Tianxiang Yin, Chen Xu, Zhiyun Chen, and Weiguo Shen*

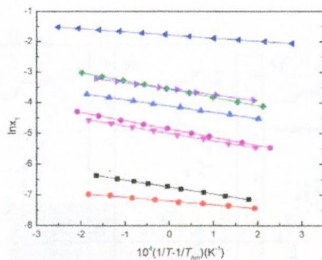


Solubility of Carbon Dioxide in Aqueous Potassium Salts of Glycine and Taurine at Absorber and Desorber Conditions
 Nick Aldenkamp,* Patrick Huttenhuis, Nathalie Penders-van Elk, Espen Steinseth Hamborg, and Geert F. Versteeg



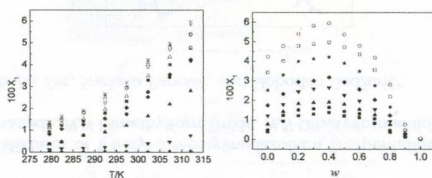
Solubility and Thermodynamic Functions of Isatin in Pure Solvents

Jin-Qiang Liu, Si-Yu Chen, and Baoming Ji*



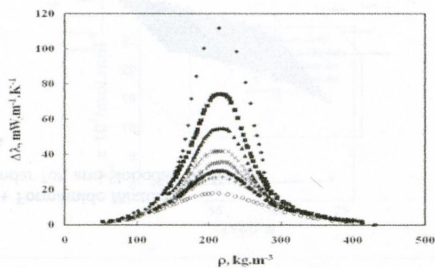
Solubility of Ibuprofen Sodium Dihydrate in Acetone + Water Mixtures: Experimental Measurement and Thermodynamic Modeling

Weiqiang Dun, Songgu Wu, Weiwei Tang, Xuemei Wang, Dengqiong Sun, Shichao Du, and Junbo Gong*

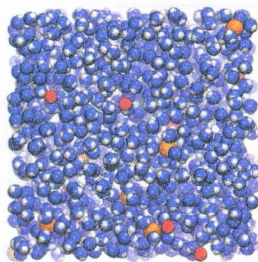


Measurements of the Thermal Conductivity of Propane in the Supercritical Region

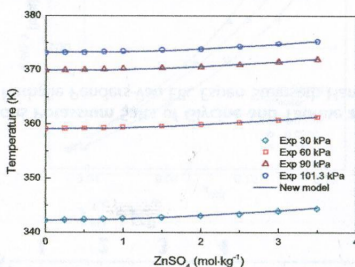
B. Le Neindre,* Y. Garrabos, and M. Nikravec



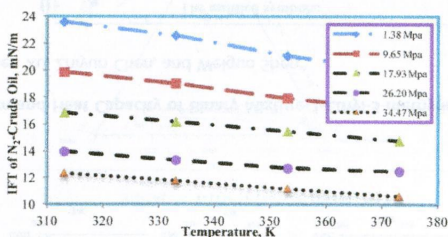
Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions by Experiment and Molecular Simulation
Steffen Reiser, Martin Horsch,* and Hans Hasse



Vapor–Liquid Equilibria for the $\text{ZnSO}_4\text{--H}_2\text{SO}_4\text{--H}_2\text{O}$ and $\text{MgSO}_4\text{--H}_2\text{SO}_4\text{--H}_2\text{O}$ Systems at (30, 60, 90, and 101.3) kPa
Geng Li, Yan Zhang, Edouard Asselin, and Zhibao Li*

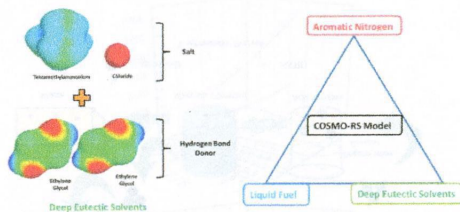


Experimental Determination of Equilibrium Interfacial Tension for Nitrogen–Crude Oil during the Gas Injection Process: The Role of Temperature, Pressure, and Composition
Abdolhossein Hemmati-Sarapardeh, Shahab Ayatollahi,* Ali Zolghadr, Mohammad-Hossein Ghazanfari, and Mohsen Masihi



Evaluating the Performance of Deep Eutectic Solvents for Use in Extractive Denitrification of Liquid Fuels by the Conductor-like Screening Model for Real Solvents

Hanee F. Hizaddin, Anantharaj Ramalingam,* Mohd Ali Hashim, and Mohamed K.O. Hadj-Kali

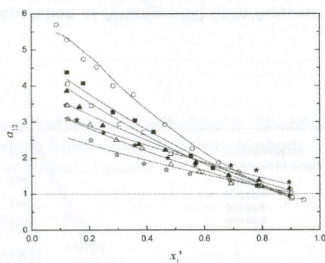


3488

DOI: 10.1021/je500443v

Isobaric Vapor–Liquid Equilibrium for Methanol + Dimethyl Carbonate + Trifluoromethanesulfonate-based Ionic Liquids at 101.3 kPa

Qunsheng Li, Shuang Zhang, Bangqin Ding, Ling Cao, Panpan Liu, Zilong Jiang, and Baohua Wang*

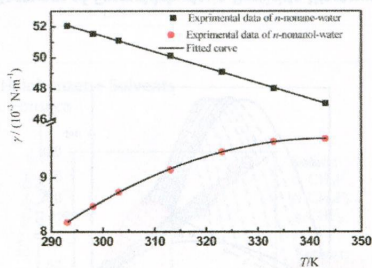


3495

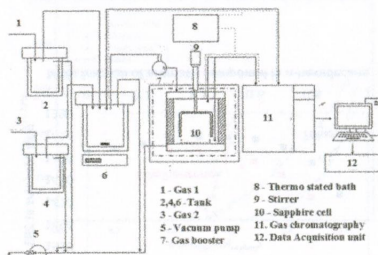
DOI: 10.1021/je500450w

Comparison Study on Temperature Dependence of the Interfacial Tension of *n*-Alkane–Water and *n*-Alcohol–Water Two Binary Systems

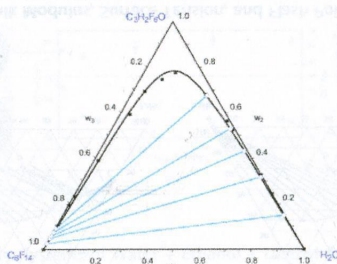
Yiling Tian, Liqian Cao, Lijuan Qiu, and Rongjiao Zhu*



Measurement of $H-L_W-V$ and Dissociation Enthalpy of Carbon Dioxide Rich Synthetic Natural Gas Mixtures
 Khalik M. Sabil,* Qazi Nasir, Bezhad Partoon, and Akbar A. Seman

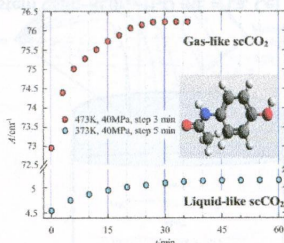


Liquid-Liquid Equilibria in Ternary Systems of Hexafluoroisopropanol + Perfluorocarbon + Water or Methanol at 298.15 K
 Martin Strejč, Karel Řehák,* Petr Beier, and Pavel Morávek



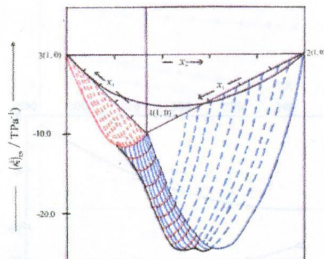
Dynamic and Static Characteristics of Drug Dissolution in Supercritical CO_2 by Infrared Spectroscopy: Measurements of Acetaminophen Solubility in a Wide Range of State Parameters

Roman D. Oparin, Abdenacer Idrissi, Maxim V. Fedorov,* and Michael G. Kiselev*



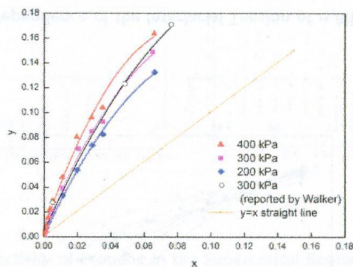
Thermodynamic Properties of Ternary Liquid Mixtures Containing *o*-Chlorotoluene: Excess Molar Volumes and Excess Isentropic Compressibilities

V. K. Sharma,* Rajni Dua, and D. Sharma



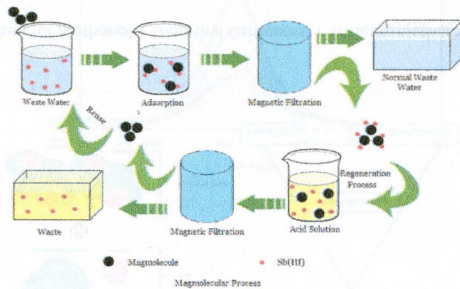
Applied Research on the Resource Recovery of Formaldehyde in Pesticide Wastewater

Lei Li,* Yaodong Liu, Kaihong Jin, Baorong Wang, and Zhibing Zhang



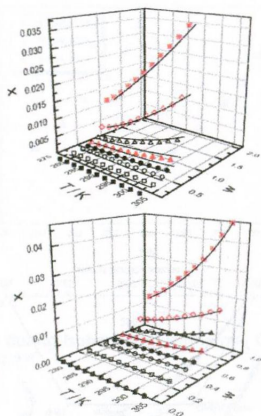
New "Magmolecular" Process for the Separation of Antimony(III) from Aqueous Solution

Ali Asghar Rooygar, Mohammad Hassan Mallah,* Hossein Abolghasemi, and Jaber Safdari



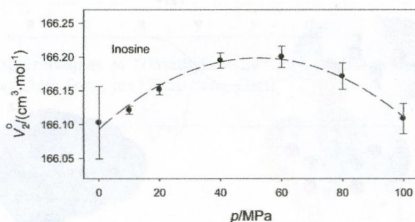
Experimental Measurement and Modeling of Solubility Data for 2,3-Dichloronitrobenzene in Methanol, Ethanol, and Liquid Mixtures (Methanol + Water, Ethanol + Water)

Rongrong Li, Bin Zhang, Ling Wang, Ganbing Yao, Yingjie Zhang, and Hongkun Zhao*



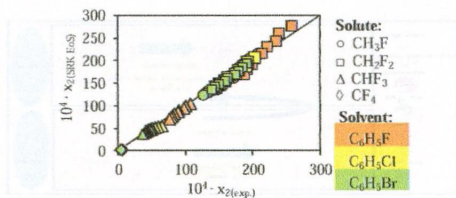
Volumetric Properties at High Pressures of the Nucleosides Inosine, 2'-Deoxyinosine, and 2'-Deoxyguanosine and the Volumetric Properties of Guanosine Derived Using Group Additivity Methods

Gavin R. Hedwig,* Geoffrey B. Jameson, and Harald Høiland



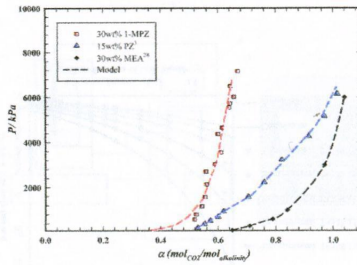
Solubility of Hydrofluorocarbons in Halobenzene Solvents

José M. M. V. Sousa* and Isabel M. A. Fonseca



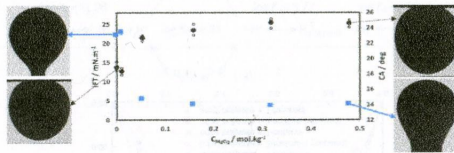
High-Pressure Solubility of Carbon Dioxide (CO₂) in Aqueous 1-Methyl Piperazine Solution

Aravind V. Rayer, Yamuna Armugam, Amr Henni,* and Paitoon Tontiwachwuthikul



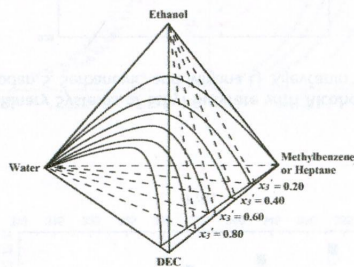
The Impacts of Aqueous Ions on Interfacial Tension and Wettability of an Asphaltenic–Acidic Crude Oil Reservoir during Smart Water Injection

Mostafa Lashkarbolooki, Shahab Ayatollahi,* and Masoud Riazi



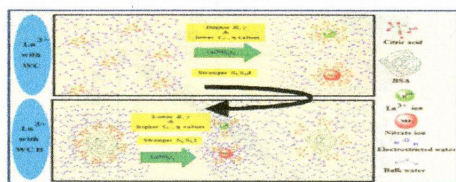
Liquid–Liquid Equilibria for Quaternary Systems of Water + Ethanol + Diethyl Carbonate + Methylbenzene or Heptane

Yao Chen,* Xiaoming Zhou, Caiyu Wen, Cui Wang, and Jitai Guo



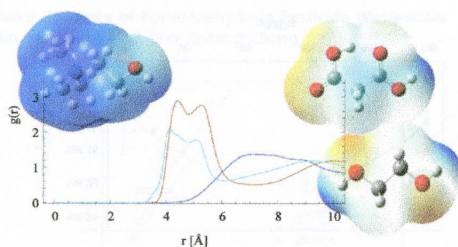
Influence of Urea on Shifting Hydrophilic to Hydrophobic Interactions of $\text{Pr}(\text{NO}_3)_3$, $\text{Sm}(\text{NO}_3)_3$, and $\text{Gd}(\text{NO}_3)_3$ with BSA in Aqueous Citric Acid: A Volumetric, Viscometric, and Surface Tension Study

Dinesh Kumar, Abhishek Chandra, and Man Singh*



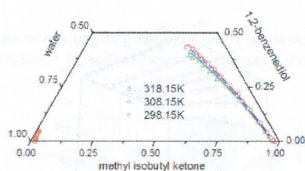
Experimental and Computational Studies of Choline Chloride-Based Deep Eutectic Solvents

Sasha L. Perkins, Paul Painter,* and Coray M. Colina*



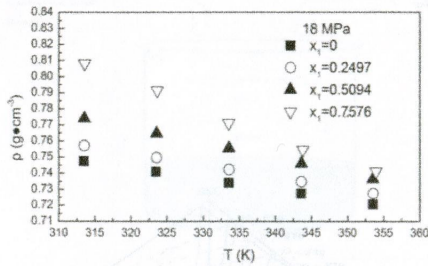
Liquid-Liquid Equilibria for the Ternary System Methyl Isobutyl Ketone + 1,2-Benzenediol + Water

Chufen Yang,* Yu Qian, Jianwei Guo, and Jingrui Chen



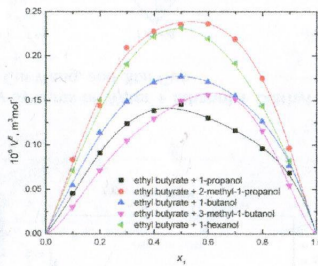
Measurement and Modeling of the Densities for CO₂ + Dodecane System from 313.55 K to 353.55 K and Pressures up to 18 MPa

Yi Zhang, Zhaoyan Liu, Weiguo Liu, Jiafei Zhao,* Mingjun Yang, Yu Liu, Dayong Wang, and Yongchen Song*



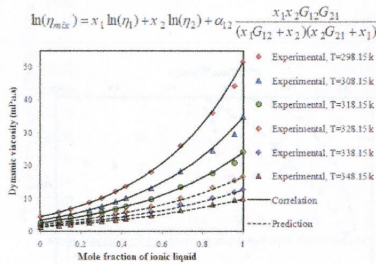
Volumetric and Viscometric Study of Binary Systems of Ethyl Butyrate with Alcohols

Divna M. Bajić, Emila M. Živković, Slobodan S. Šerbanović, and Mirjana Lj. Kijevčanin*



Estimation of the Viscosity of Ionic Liquids Containing Binary Mixtures Based on the Eyring's Theory and a Modified Gibbs Energy Model

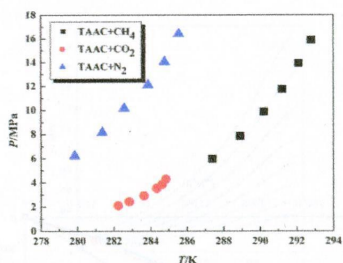
Saeid Atashrouz, Mohammad Zarghampour, Shiva Abdollahimi, Gholamreza Pazuki,* and Bahram Nasernejad



$$\ln(\eta_{mix}) = x_1 \ln(\eta_1) + x_2 \ln(\eta_2) + \alpha_{12} \frac{x_1 x_2 G_{12} G_{21}}{(x_1 G_{12} + x_2)(x_2 G_{21} + x_1)}$$

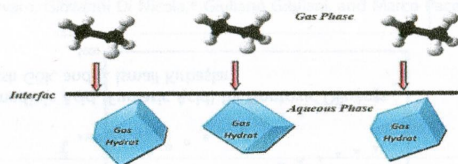
Phase Equilibrium Conditions for the Double Semiclathrate Hydrate Formed with Tetraamylammonium Chloride Plus CH_4 , CO_2 , or N_2

Ling-Li Shi and De-Qing Liang*



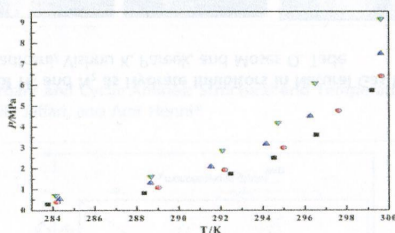
Investigation of Ethane Hydrate Formation during Isobaric and Isothermal Conditions

M. Naseh, V. Mohebbi,* and R. M. Behbahani



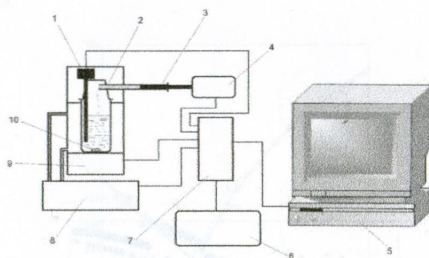
Phase Equilibrium and Dissociation Enthalpies of Trimethylene Sulfide + Methane Hydrates in Brine Water Systems

Lu Li, Qiu-Nan Lv, Xiao-Sen Li,* Jing-Chun Feng, and Zhao-Yang Chen



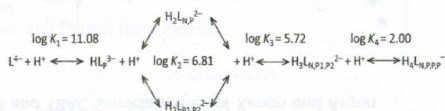
Solubility of Tris(hydroxymethyl)aminomethane in Water + 1-Propanol Mixtures at Various Temperatures

Vahid Jouyban-Gharamaleki, Karim Jouyban-Gharamaleki, Jafar Soleymani, William E. Acree Jr., and Abolghasem Jouyban*



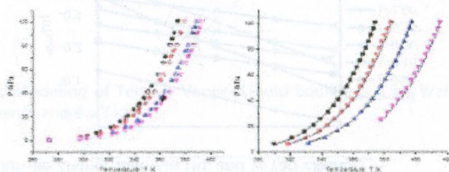
Solubility, Activity Coefficients, and Protonation Sequence of Risedronic Acid

Clemente Bretti, Ignacy Cukrowski,* Concetta De Stefano,* and Gabriele Lando



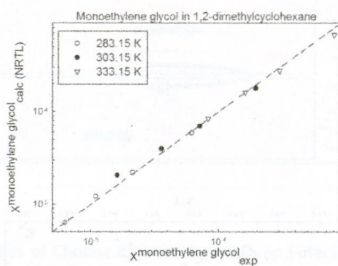
Experimental and Modeling of Vapor–Liquid Equilibria for Electrolyte Solution Systems

Xianzhen Xu, Yangdong Hu, Lianying Wu,* and Suhong Zhang



Liquid–Liquid Equilibria at Three Temperatures (between 280.15 K and 333.15 K) of Binary, Ternary, and Quaternary Systems Involving Monoethylene Glycol, Water, Cyclohexane, *para*-Xylene, *trans*- and *cis*-Dimethylcyclohexane, and *trans*- and *cis*-Decahydronaphthalene

Cécile Lindemann, Pierre Duchet-Suchaux, Ramy Abou Naccoul, Ilham Mokbel,* Vincent Malicet, and Jose Jacques



Experimental Study on Feasibility of H₂ and N₂ as Hydrate Inhibitors in Natural Gas Pipelines

Emmanuel O. Obanijesu,* Ahmed Barifcani, Vishnu K. Pareek, and Moses O. Tade



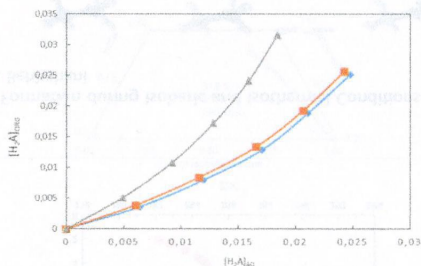
Growth begins (t = 0 min)

Growth (t = 5 mins)

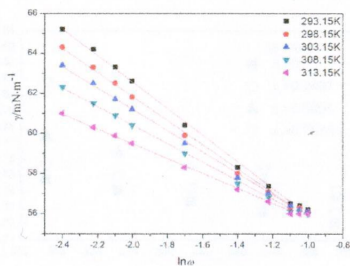
Blockage (t = 8 mins)

Reactive Extraction of (*E*)-Butenedioic Acid (Fumaric Acid) by Nontoxic Diluents

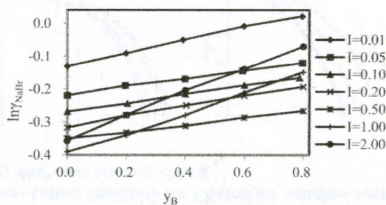
Hasan Uslu,* Ayşegül Gemici, Aşlı Gök, and Ş. İsmail Kırbaşlar



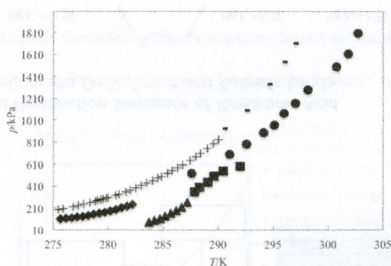
Density, Surface Tension, and Cloud Point of Aqueous Solutions of β -Cyclodextrin-polyethylene Glycol
Yuan Liu, Changjun Zou,* Taiyang Wang, and Ming Li



Studies on Mean Activity Coefficients of NaBr in NaBr-SrBr₂-H₂O Ternary System at 298.15 K by EMF Method
Mei-Fang Zhou, Shi-Hua Sang,* Jun-Jie Zhang, Juan-Xin Hu, and Si-Yao Zhong

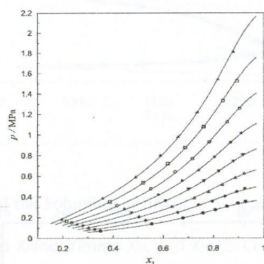


Equilibrium Conditions for TBAB and TBAC Semiclathrates of Xenon and Argon
M. Garcia and M. A. Clarke*



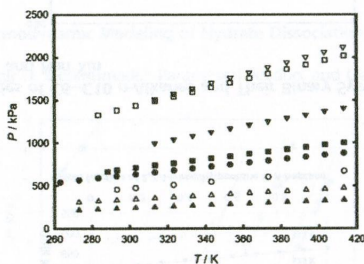
Solubility of Dimethyl Ether in Pentaerythritol Tetrahexanoate (PEC6) and in Pentaerythritol Tetraoctanoate (PEC8) Between (283.15 and 353.15) K

YanJun Sun, Xiaopo Wang,* Na Gong, and Zhigang Liu



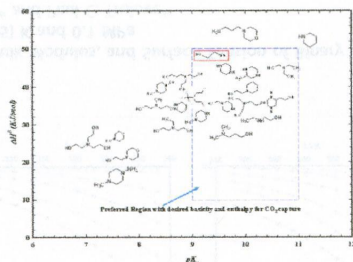
PvT Measurements of *trans*-1,3,3,3-Tetrafluoroprop-1-ene + Methane and *trans*-1,3,3,3-Tetrafluoroprop-1-ene + Nitrogen Binary Pairs

J. Steven Brown, Francesco Corvaro, Giovanni Di Nicola,* Giuliano Giuliani, and Marco Pacetti

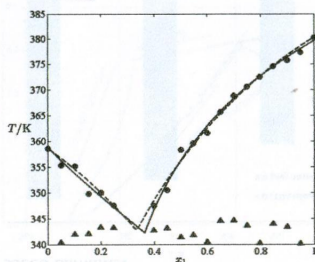


Dissociation Constants (pK_a) of Tertiary and Cyclic Amines: Structural and Temperature Dependences

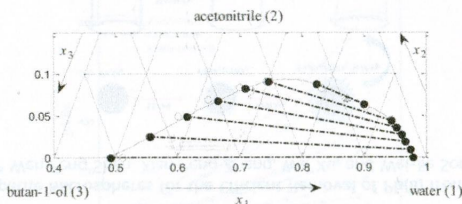
Aravind V. Rayer, Kazi Z. Sumon, Laila Jaffari, and Amr Henni*



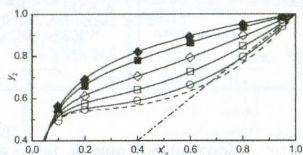
Solid–Liquid Equilibria for Six Binary Mixtures of Nonanedioic Acids, Decanedioic Acid, 3-Methylheptanedioic Acid, 2,2-Dimethylbutanedioic Acid, and 2,3-Dimethylbutanedioic Acid
Tzu-Chi Wang* and Chi-Yang Chan



Ternary Liquid–Liquid Equilibrium Data for the Water + Acetonitrile + {Butan-1-ol or 2-Methylpropan-1-ol} Systems at (303.2, 323.2, 343.2) K and 1 atm
Caleb Narasigadu,* Muven Naidoo, and Deresh Ramjugernath

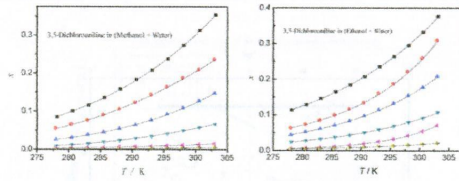


Experimental Measurement and Modeling of Ternary Vapor–Liquid Equilibrium for Water + 2-Propanol + Glycerol
Lianzhong Zhang,* Weidong Zhang, and Bo Yang



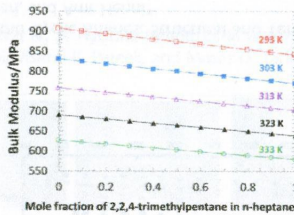
Solubility Measurement and Correlation for 3,5-Dichloroaniline in (Methanol + Water) and (Ethanol + Water) Mixed Solvents

Wan-Xin Li,* Jian-kang Yi, Gan-Bing Yao, and Hong-kun Zhao*



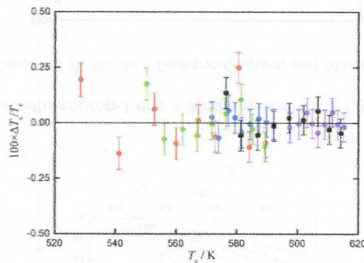
Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of *n*-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa

Dianne J. Luning Prak,* Jim S. Cowart,* and Paul C. Trulove*



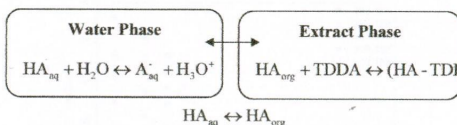
Determination of the Critical Properties of C6–C10 *n*-Alkanes and Their Binary Systems Using a Flow Apparatus

Yang Liu, Ying Zhang, Mao-gang He,* and Nan Xin



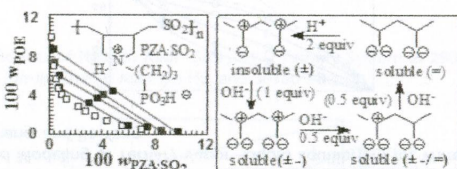
Investigation of Extraction of Phenol from Wastewater Using *N,N*-Didodecyl-1-dodecanamine (Tridodecylamine) in Benzene

Dipaloy Datta* and Hasan Uslu



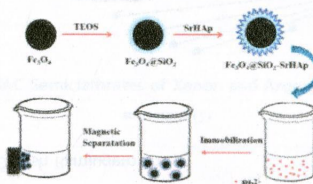
Construction of Aqueous Two-Phase Systems of the Cyclopolymer of (Diallylamino)propylphosphonate and Its Sulfur Dioxide Copolymer with Polyoxyethylene Using ¹H NMR Spectroscopy

Shaikh A. Ali,* Izzat W. Kazi, and Nisar Ullah



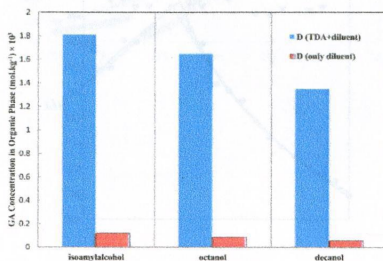
Magnetic Strontium Hydroxyapatite Microspheres for the Efficient Removal of Pb(II) from Acidic Solutions

Fu-Qiang Zhuang, Rui-Qin Tan,* Wen-Feng Shen, Xian-Peng Zhang, Wei Xu, and Wei-Jie Song



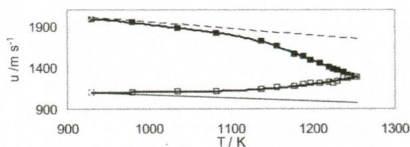
Extraction Equilibria of Gibberellic Acid by Tridodecylamine Dissolved in Alcohols

Hasan Uslu, Dipaloy Datta,* and Hisham Saeed Bamufleh



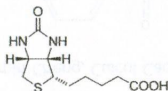
Sound Velocities for Dissolving AgI + LiCl Melts

Victor P. Stepanov* and Vladimir I. Minchenko



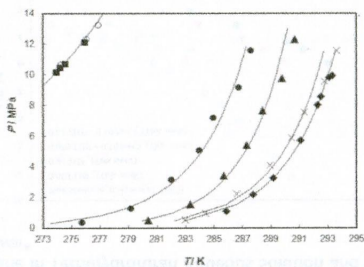
Experimental Measurement and Modeling of the Solubility of Biotin in Six Pure Solvents at Temperatures from 298.15 K to 333.85 K

Jiahui Su, Chao Qian, Nengzhen Luo, Xiangao Xiang, Yiming Xu, and Xinzhi Chen*



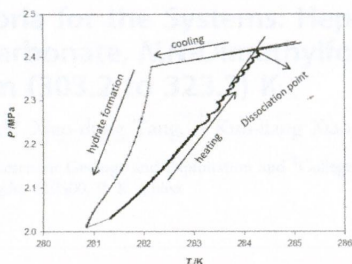
Experimental Measurement and Thermodynamic Modeling of Hydrate Dissociation Conditions for the Argon + TBAB + Water System

Saeedeh Babae, Hamed Hashemi, Amir H. Mohammadi,* Paramespri Naidoo, and Deresh Ramjugernath*



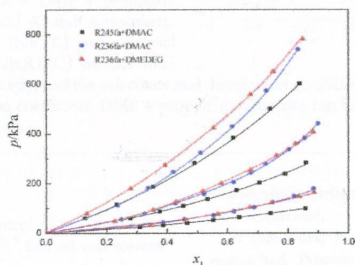
Experimental Measurements and Thermodynamic Modeling of Clathrate Hydrate Dissociation Conditions for Refrigerants R116, R23, and Their Mixture R508B

Hamed Hashemi, Saeedeh Babaei, Paramesri Naidoo, Amir H. Mohammadi,* and Deresh Ramjugernath*



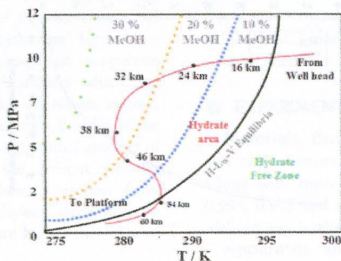
Measurement and Correlation of Isothermal Vapor–Liquid Equilibrium of 1,1,1,3,3-Pentafluoropropane + *N,N*-Dimethylacetamide and 1,1,1,3,3,3-Hexafluoropropane + *N,N*-Dimethylacetamide/Diethylene Glycol Dimethyl Ether Systems

Min Zhang, Danxing Zheng,* Wenzhi Yang, and Xiaoxiao Li



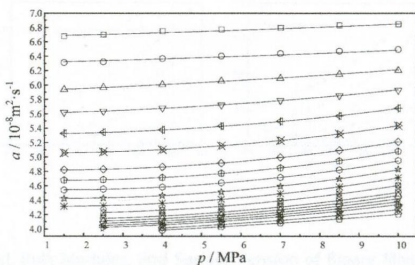
Hydrate Dissociation Condition Measurement of CO₂-Rich Mixed Gas in the Presence of Methanol/Ethylene Glycol and Mixed Methanol/Ethylene Glycol + Electrolyte Aqueous Solution

Qazi Nasir, K. K. Lau,* Bhajan Lal, and Khalik M. Sabil



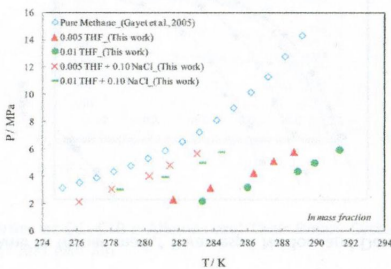
Thermal Diffusivity of 2-Methoxy-2-methylpropane at Temperatures from (303.15 to 493.15) K and Pressures from (1.5 to 10) MPa

Libin Chen, Ying Zhang, Sheng Wang, Xiong Zheng, and Maogang He*



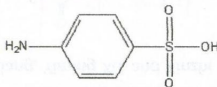
Phase Stability of Hydrates of Methane in Tetrahydrofuran Aqueous Solution and the Effect of Salt

Deepjyoti Mech and Jitendra S. Sangwai*



Thermodynamic Models for Determination of the Solubility of Sulfanilic Acid in Different Solvents at Temperatures from (278.15 to 328.15) K

Yonghong Hu,* Qi Zhang, Ying Shi, Yang Yang, Limin Cheng, Cuicui Cao, and Wenge Yang



Correction to Estimation of Correlation between Electrical Conductivity and CO₂ Absorption in a Monoethanolamine Solvent System

Sang-Jun Han and Jung-Ho Wee*

