

May 10, 2012

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Pages 1349-1636

REVIEWS

Indirect Determination of Vapor Pressures by Capillary Gas–Liquid Chromatography:

Analysis of the Reference Vapor-Pressure Data and Their Treatment

Květoslav Růžička, Bohumír Koutek, Michal Fulem, and Michal Hoskovec

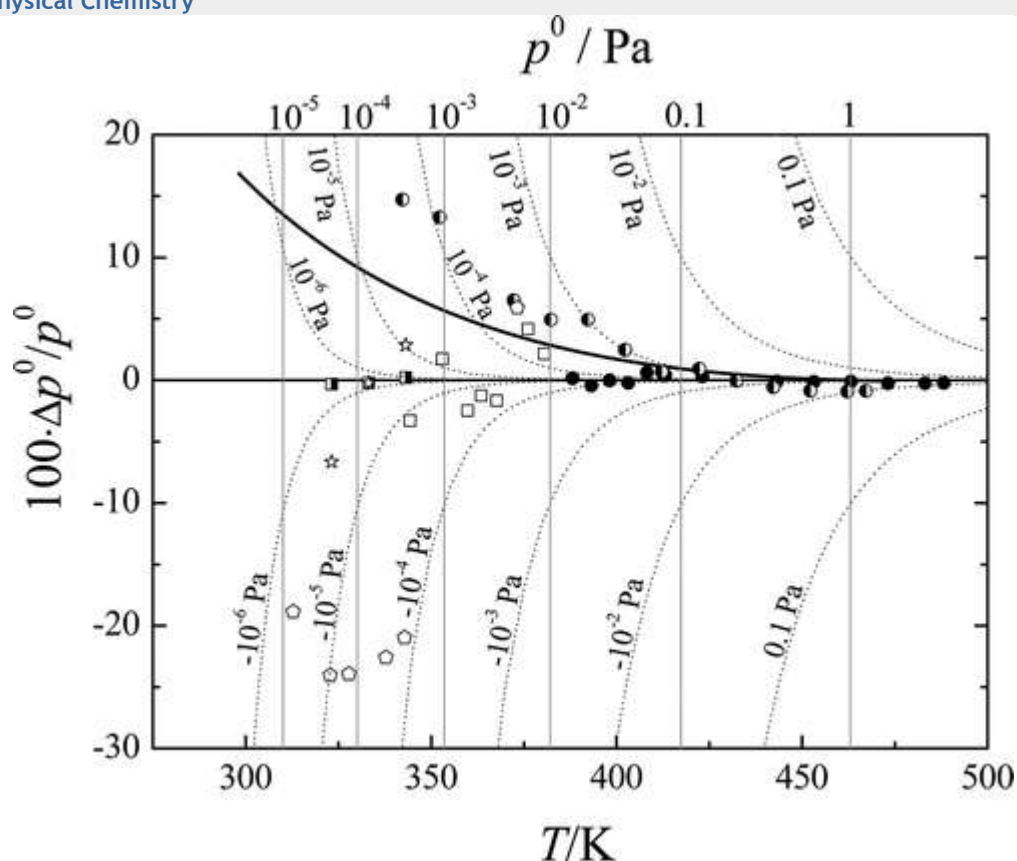
pp 1349-1368

Publication Date (Web): April 30, 2012 (Review)

DOI: 10.1021/je2013186

CCS Section:

General Physical Chemistry



ARTICLES

Interfacial Tension of (Brines + CO₂): CaCl₂(aq), MgCl₂(aq), and Na₂SO₄(aq) at Temperatures between (343 and 423) K, Pressures between (2 and 50) MPa, and Molalities of (0.5 to 5) mol·kg⁻¹

Xuesong Li, Edo S. Boek, Geoffrey C. Maitland, and J. P. Martin Trusler

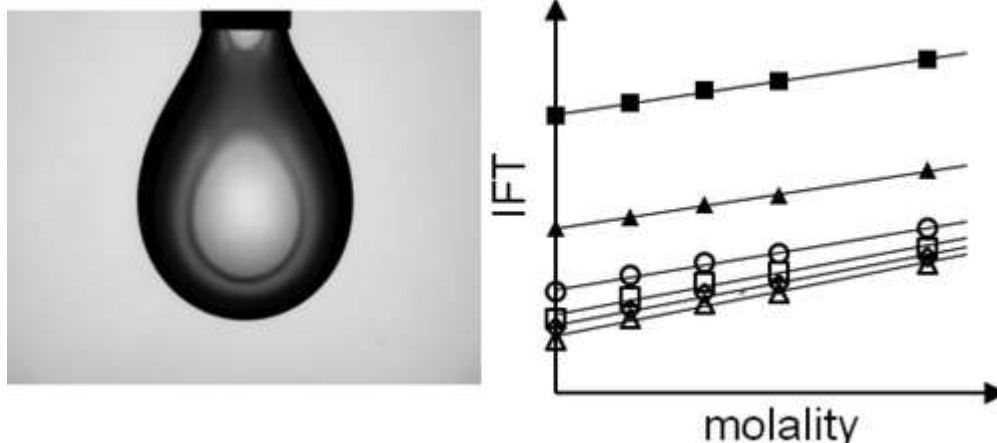
pp 1369-1375

Publication Date (Web): April 6, 2012 (Article)

DOI: 10.1021/je300304p

CCS Section:

Phase Equilibriums, Chemical Equilibriums, and Solutions



Shear- and Temperature-Dependent Viscosity Behavior of Two Phosphonium-Based Ionic Liquids and Surfactant Triton X-100 and Their Biocidal Activities

Indrajyoti Mukherjee, Kaushik Manna, Gargi Dinda, Soumen Ghosh, and Satya P. Moulik

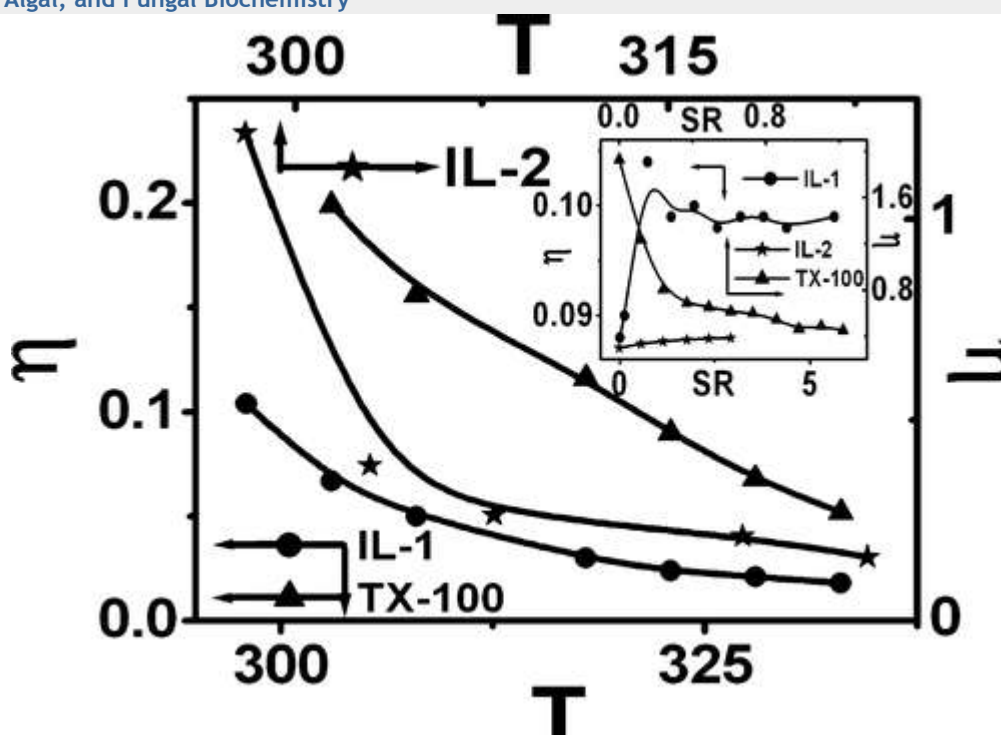
pp 1376-1386

Publication Date (Web): March 19, 2012 (Article)

DOI: 10.1021/je200938k

CCS Section:

Microbial, Algal, and Fungal Biochemistry



Densities and Viscosities of Binary Blends of Methyl Esters + Ethyl Esters and Ternary Blends of Methyl Esters + Ethyl Esters + Diesel Fuel from $T = (293.15 \text{ to } 358.15) \text{ K}$

Saeid Baroutian, Kaveh Shahbaz, Farouq S. Mjalli, Mohd A. Hashim, and Inas M. AlNashef

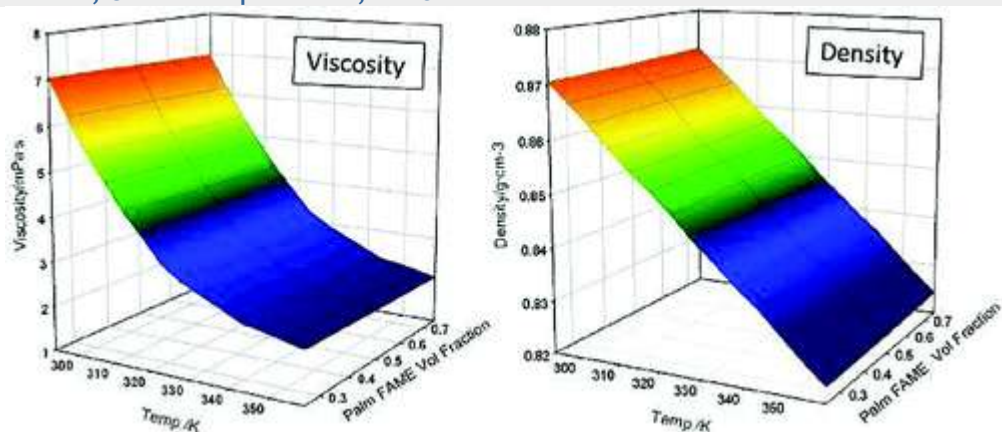
pp 1387-1395

Publication Date (Web): April 9, 2012 (Article)

DOI: 10.1021/je2013445

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Densities and Viscosities of Naphthalen-1-ol, Naphthalen-2-ol, and 1-Aminonaphthalene in the Solvents of Ethanol, Propan-1-ol, and Butan-1-ol

Shuang Han, Chunying Zhu, and Youguang Ma

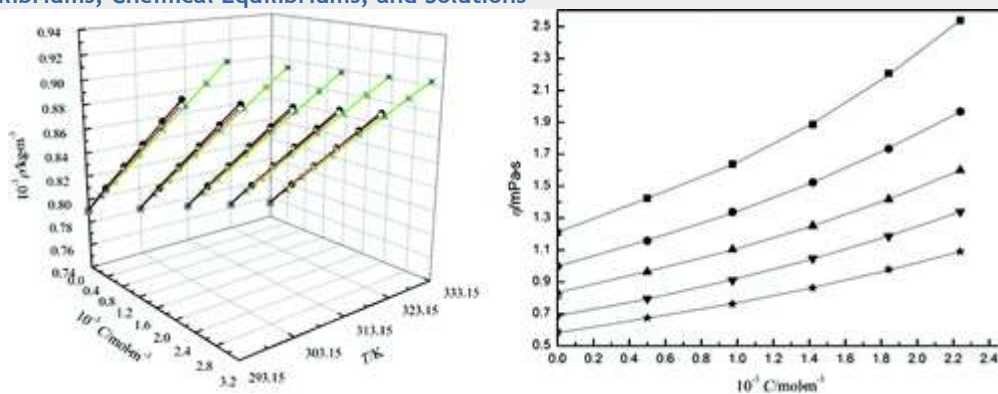
pp 1396-1403

Publication Date (Web): March 20, 2012 (Article)

DOI: 10.1021/je201222n

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Thermophysical Properties of Lithium Nitrate Trihydrate from (253 to 353) K

Patrick J. Shamberger and Timothy Reid

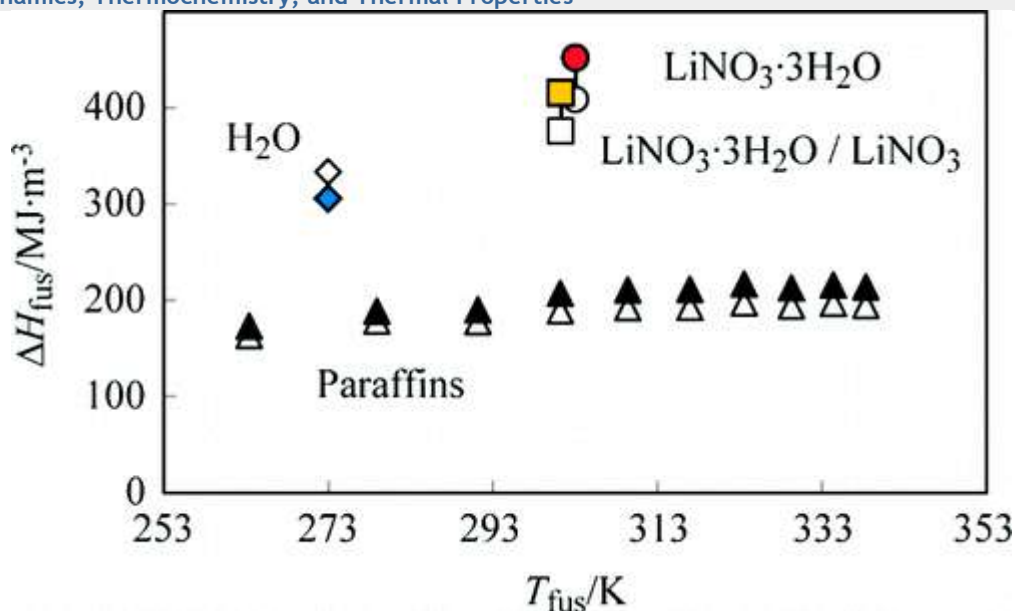
pp 1404-1411

Publication Date (Web): April 10, 2012 (Article)

DOI: 10.1021/je3000469

Section:

Thermodynamics, Thermochemistry, and Thermal Properties



Activity Coefficients and Excess Gibbs Energies for Binary Mixtures of *N*-Methyl-2-pyrrolidone with Some Substituted Ethanols

K. Rayapa Reddy, D. Bala Karuna Kumar, G. Srinivasa Rao, P. V. S. Sairam, P. Anila, and C. Rambabu

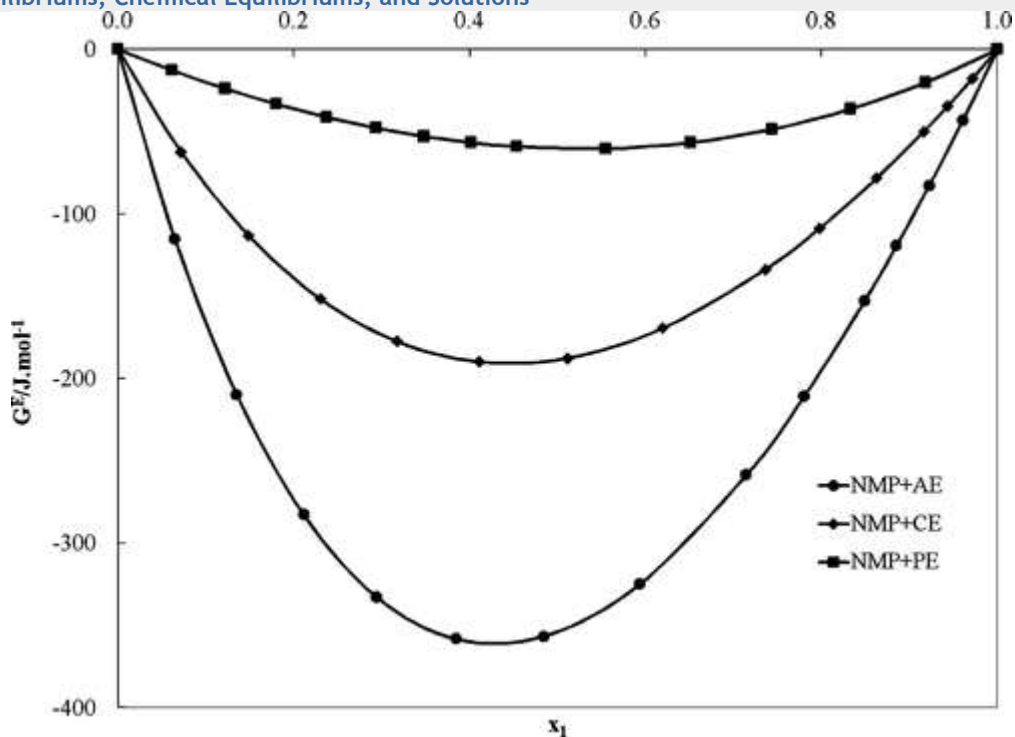
pp 1412-1416

Publication Date (Web): April 17, 2012 (Article)

DOI: 10.1021/je3002078

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Liquid–Liquid Equilibria in Ternary and Quaternary Systems Present in Biodiesel Production from Soybean Oil at (298.2 and 333.2) K

Alex Barreto Machado, Yurany Camacho Ardila, Leonardo Hadlich de Oliveira, Martín Aznar, and Maria Regina Wolf Maciel

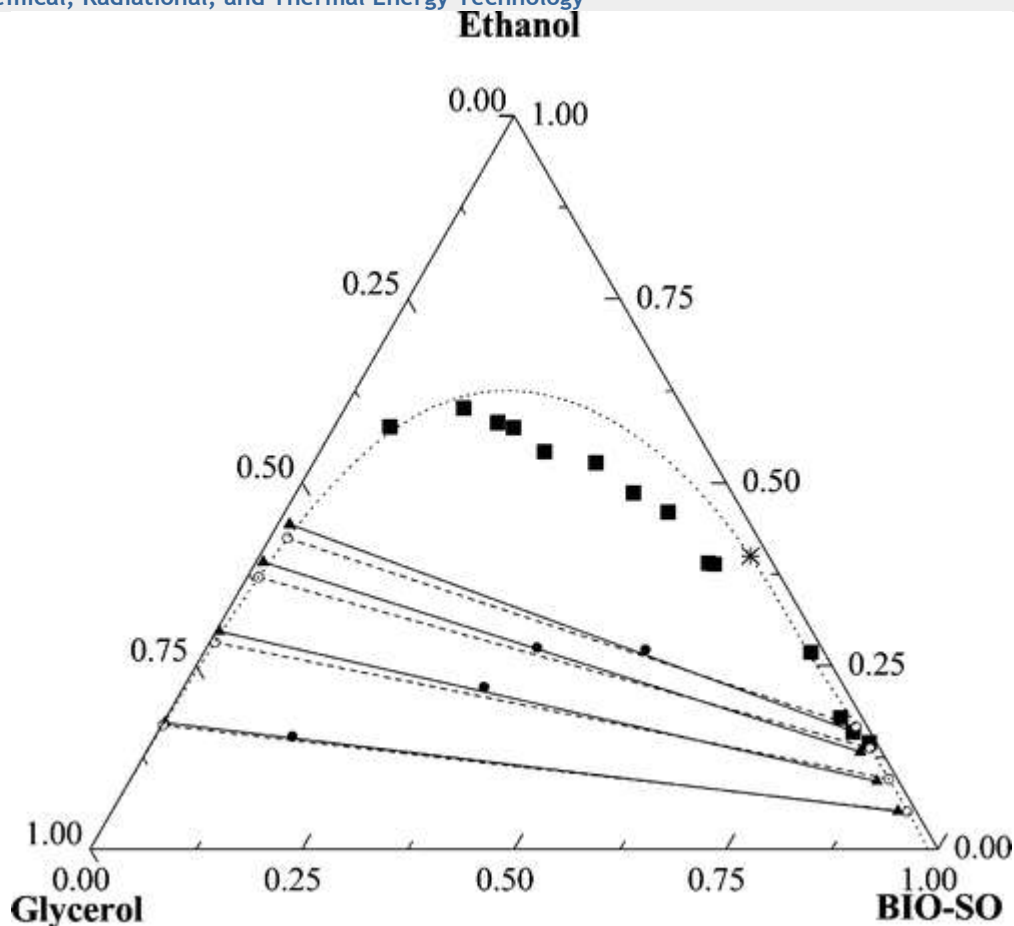
pp 1417–1422

Publication Date (Web): April 17, 2012 (Article)

DOI: 10.1021/je201243u

Section:

Electrochemical, Radiational, and Thermal Energy Technology



Partial Molar Heat Capacities at Chosen Temperatures in the Range (298.15 to 328.15) K and Partial Molar Volumes at 298.15 K of *N*-Acetyl-*N'*-methyl-L- α -amino Acid Amides in Aqueous Solution

Sylwia Belica, Katarzyna Łudzik, and Bartłomiej Patecz

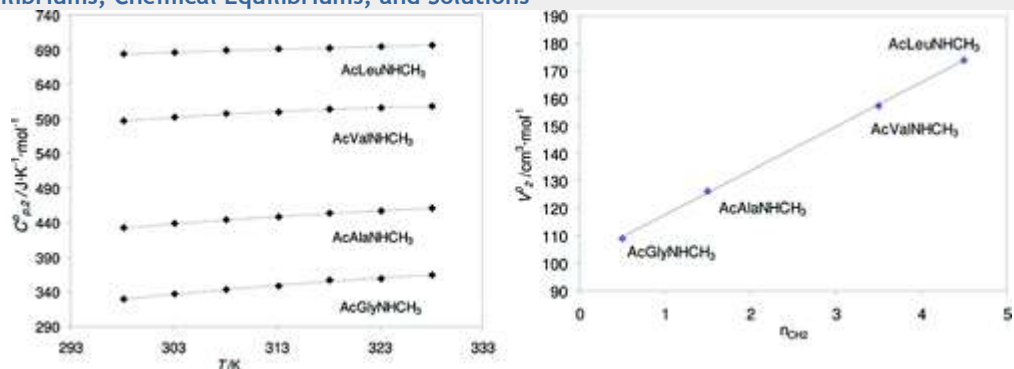
pp 1423–1432

Publication Date (Web): April 5, 2012 (Article)

DOI: 10.1021/je2012555

Section:

Phase Equilibriums, Chemical Equilibriums, and Solutions



Gas-Hydrate Phase Equilibrium for Mixtures of Sulfur Hexafluoride and Hydrogen

Da-Hye Park, Bo Ram Lee, Jeong-Hoon Sa, and Kun-Hong Lee

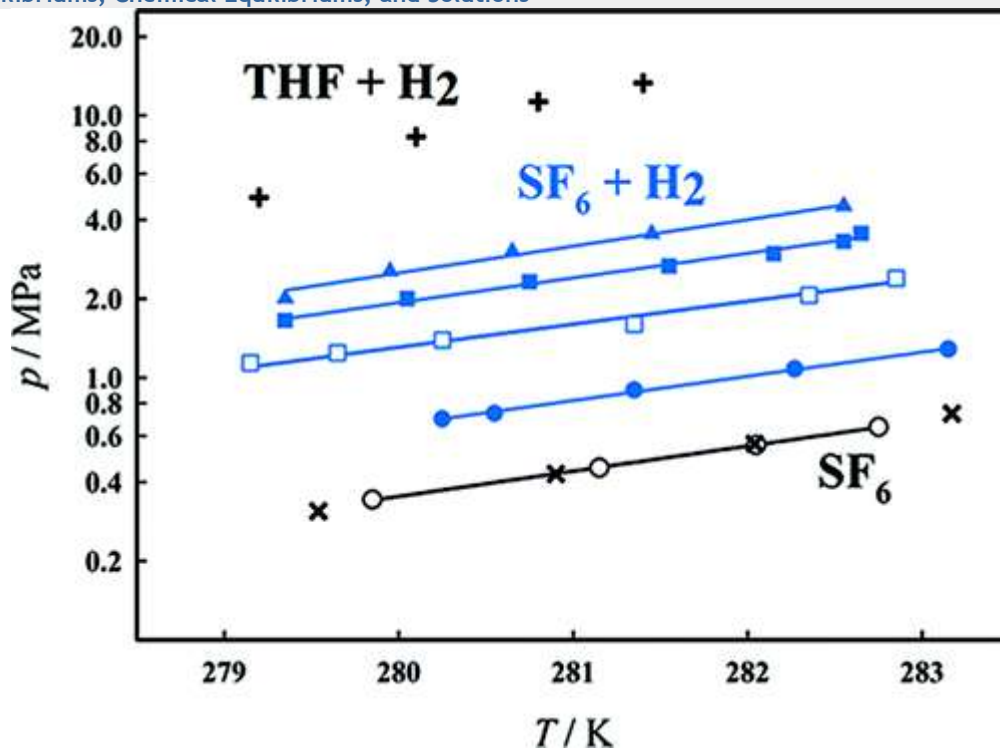
pp 1433-1436

Publication Date (Web): April 10, 2012 (Article)

DOI: 10.1021/je201273b

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Sorptive Removal of Phenol by Zeolitic Bagasse Fly Ash: Equilibrium, Kinetics, and Column Studies

Ritesh Tailor, Bhavna Shah, and Ajay Shah

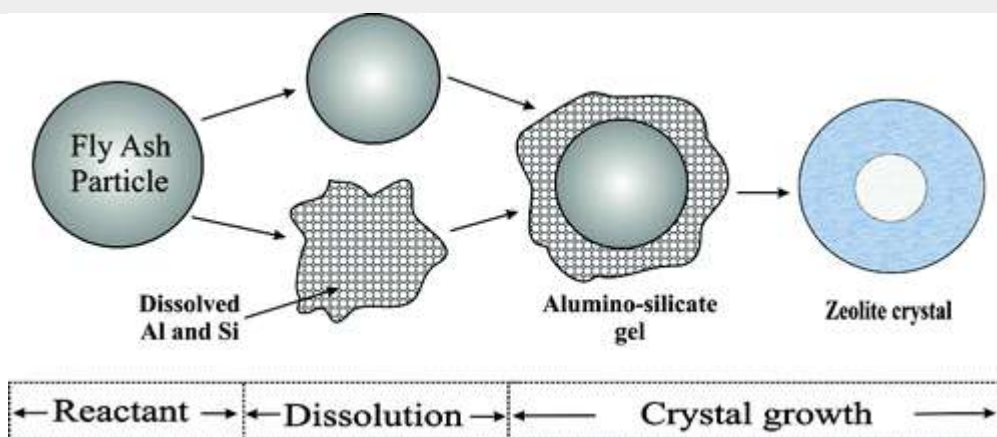
pp 1437-1448

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DOI: 10.1021/je300399y

Section:

Water



Solubilities of Ammonia and Ammonium Chloride in Ammoniated and Nonammoniated Methanol and Ethylene Glycol between 298 K and 353 K

Mark I. Pownceby, David H. Jenkins, Roman Ruzbacky, and Sophia Saunders

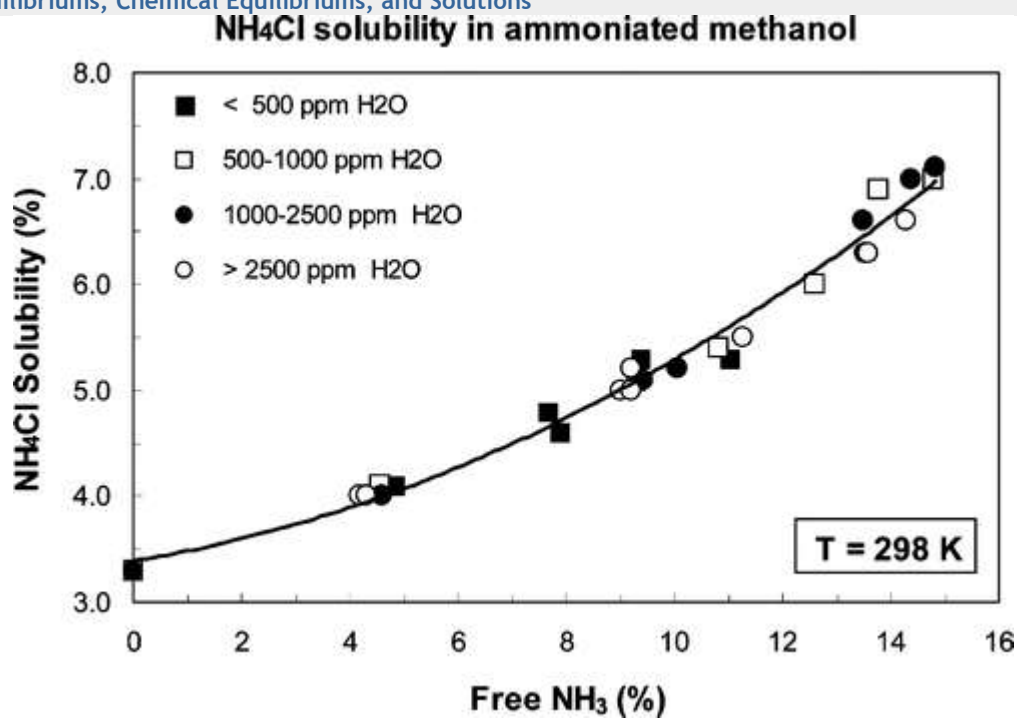
pp 1449-1455

Publication Date (Web): April 5, 2012 (Article)

DOI: 10.1021/je201321z

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



The Removal of 2-Chloroethyl Ethyl Sulfide Using Activated Carbon Nanofibers Embedded with MgO and Al₂O₃ Nanoparticles

Saeed Dadvar, Hossein Tavanai, Mohammad Morshed, and Mehran Ghiaci

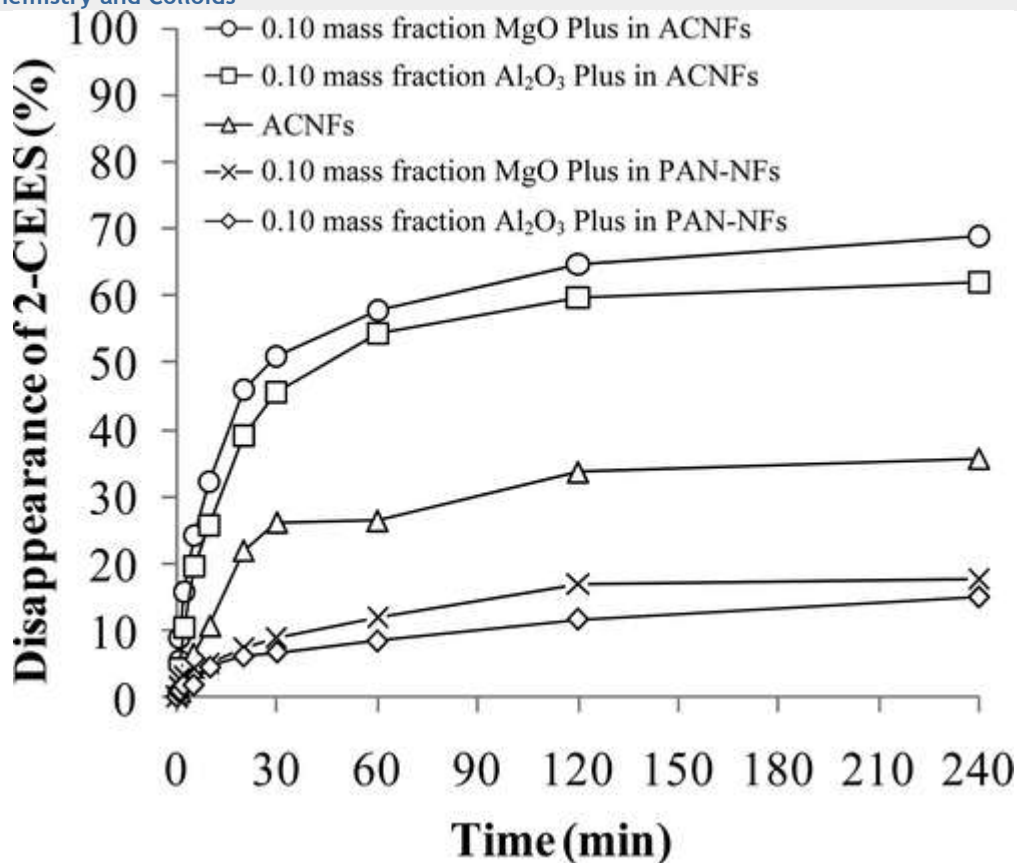
pp 1456-1462

Publication Date (Web): April 5, 2012 (Article)

DOI: 10.1021/je201328s

Section:

Surface Chemistry and Colloids



Measurement and Correlation of the Solubility of 2,6-Diaminohexanoic Acid Hydrochloride in Aqueous Methanol and Aqueous Ethanol Mixtures

Hua Sun, Min Li, Jingtian Jia, Fengkui Tang, and Erhong Duan

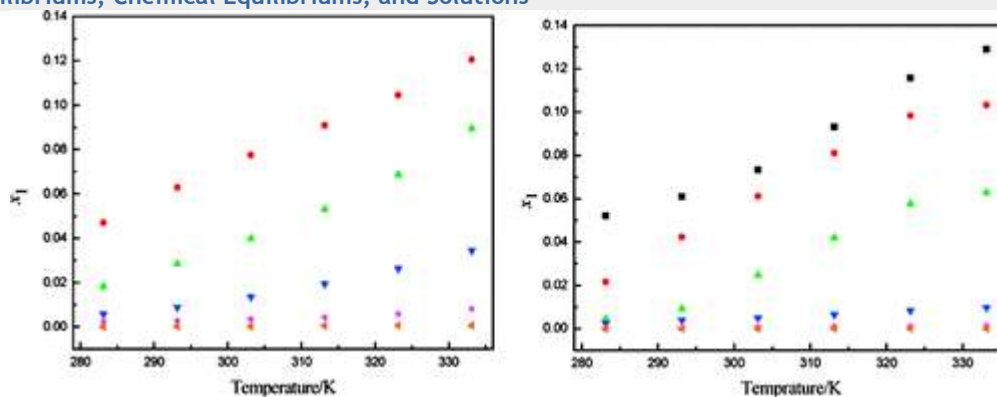
pp 1463-1467

Publication Date (Web): April 5, 2012 (Article)

DOI: 10.1021/je300173v

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Transfer Partial Molar Volumes of L-Alanine/L-Glutamine/Glycylglycine from Water to 0.512 mol·kg⁻¹ Aqueous KNO₃/K₂SO₄ Solutions at (298.15 to 323.15) K

Riyazuddeen and Umaima Gazal

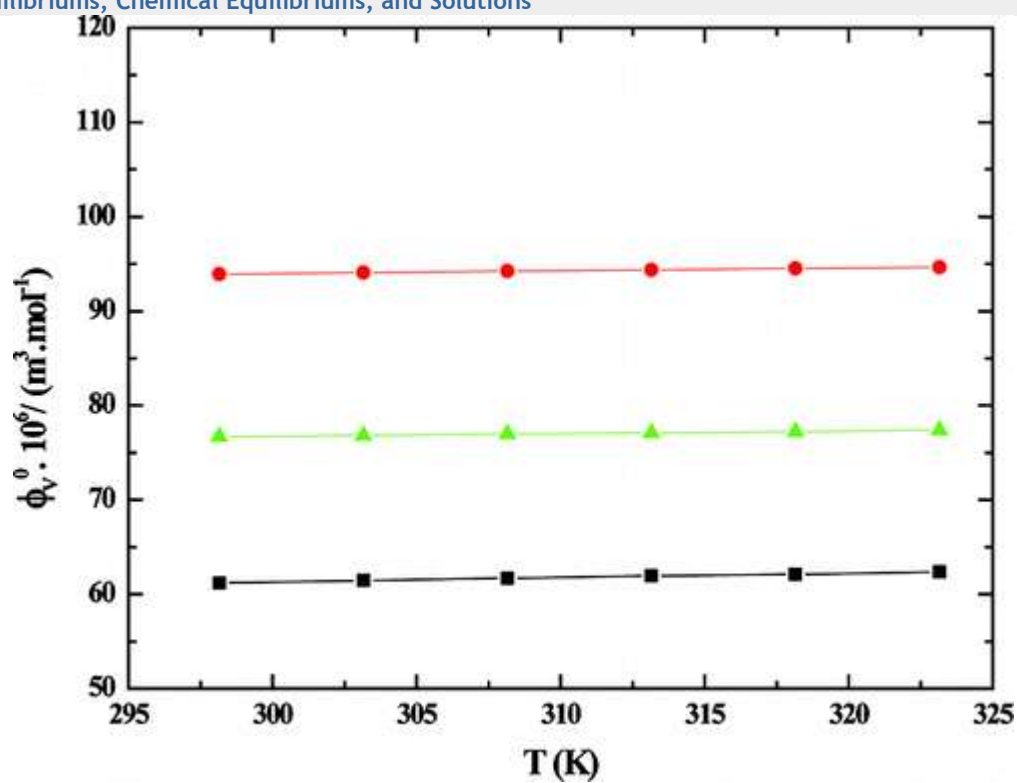
pp 1468-1473

Publication Date (Web): April 30, 2012 (Article)

DOI: 10.1021/je300083m

Section:

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Experimental Measurements and Predictions of Gas Hydrate Dissociation Conditions in the Presence of Methanol and Ethane-1,2-diol Aqueous Solutions

Jafar Javanmardi, Saeedeh Babaei, Ali Eslamimanesh, and Amir H. Mohammadi

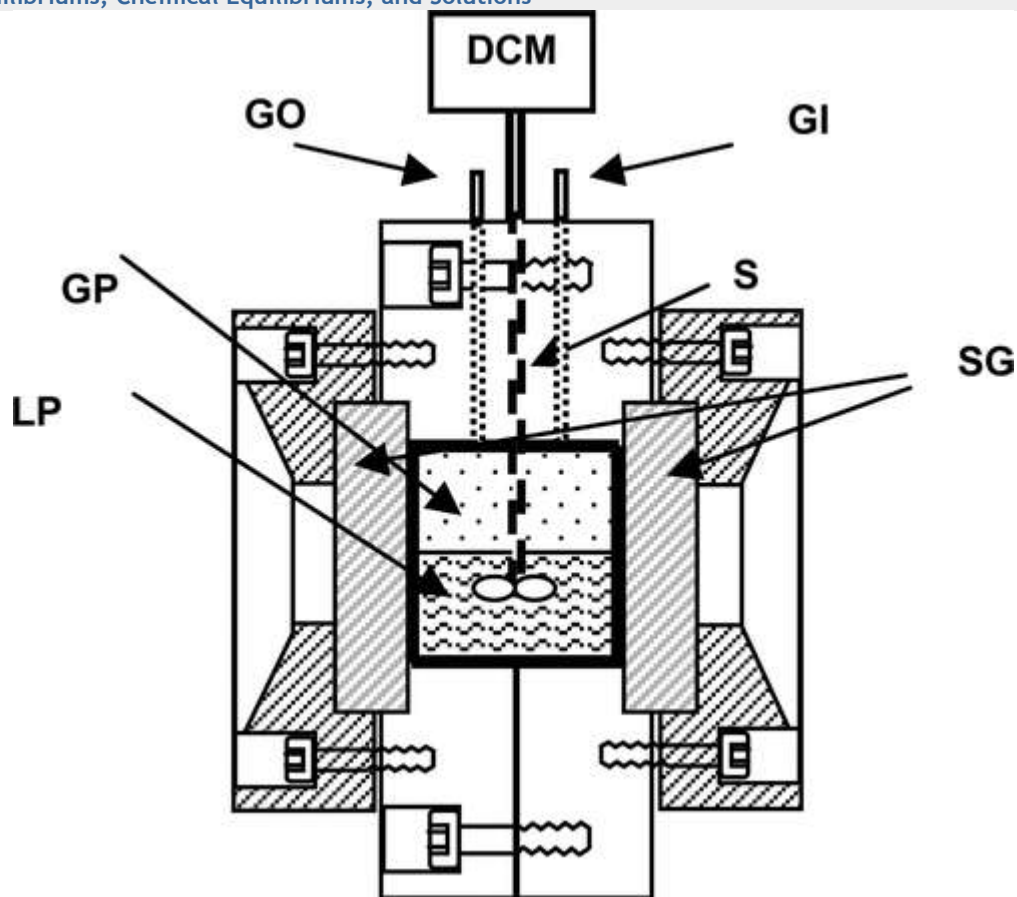
pp 1474-1479

Publication Date (Web): April 10, 2012 (Article)

DOI: 10.1021/je2013846

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Activity Coefficients at Infinite Dilution of Volatile Compounds in Water: Effect of Temperature and Salt Concentration

Rodrigo Martínez, María Teresa Sanz, Sagrario Beltrán, and Elena Corcuera

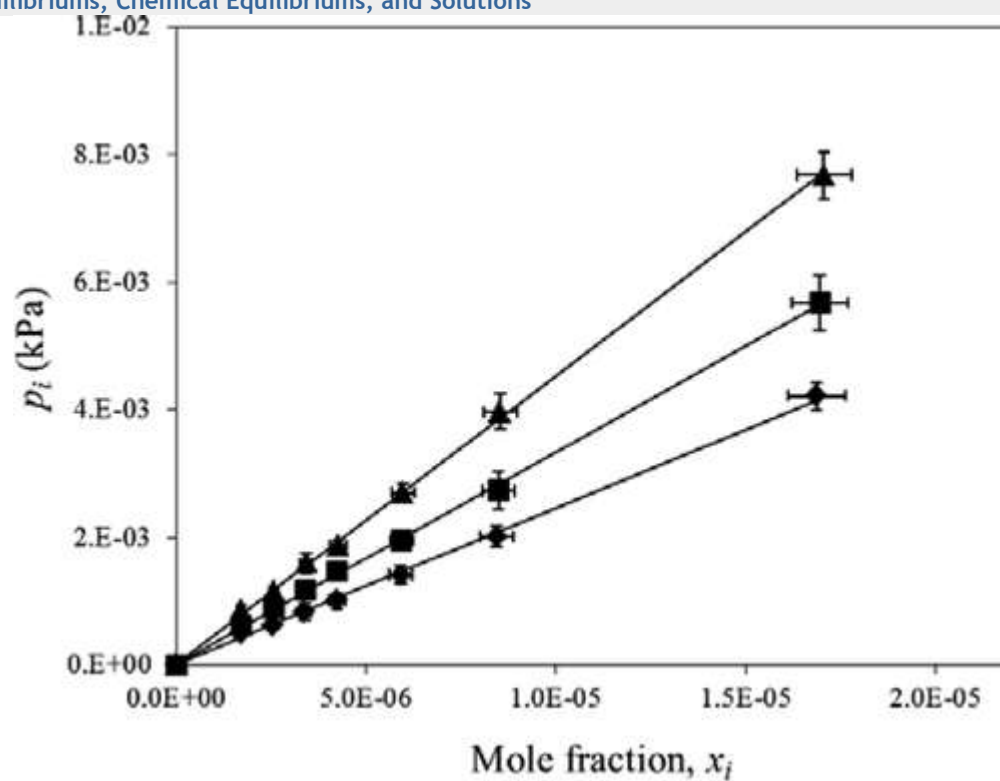
pp 1480-1485

Publication Date (Web): April 6, 2012 (Article)

DOI: 10.1021/je2013878

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Thermal Conductivity and Density of $(\text{NH}_4)_2\text{SO}_4 + \text{H}_2\text{O}$, $\text{NH}_4\text{NO}_3 + \text{H}_2\text{O}$, and $(\text{NH}_4)_2\text{SO}_4 + \text{NH}_4\text{NO}_3 + \text{H}_2\text{O}$ Solutions at $T = (278.15 \text{ to } 333.15) \text{ K}$

Yuan-Yuan Che, Jian Shen, Jun-Chao Zhou, and Chao-Hong He

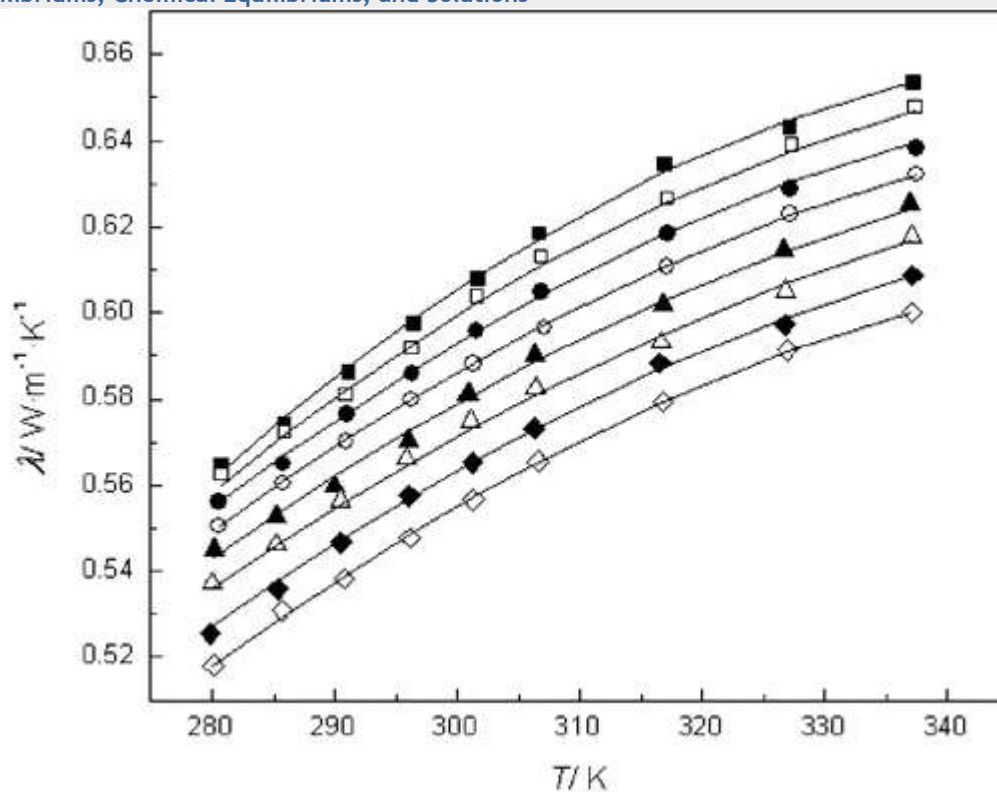
pp 1486-1491

Publication Date (Web): April 5, 2012 (Article)

DOI: 10.1021/je201390r

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Solubility of L-Phenylalanine Anhydrous and Monohydrate Forms: Experimental Measurements and Predictions

Jie Lu, Qing Lin, Zhen Li, and Sohrab Rohani

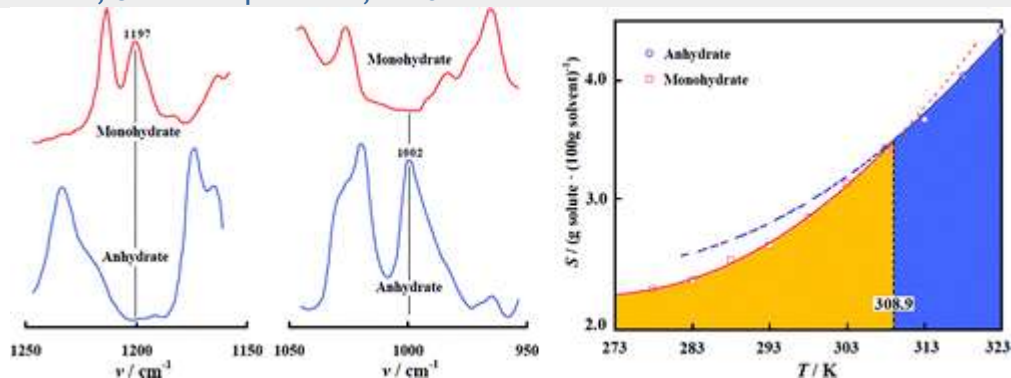
pp 1492-1498

Publication Date (Web): April 15, 2012 (Article)

DOI: 10.1021/je201354k

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Theta Temperatures of Chlorinated Poly(propene) Solutions

Siye Tang and Xueru Dong

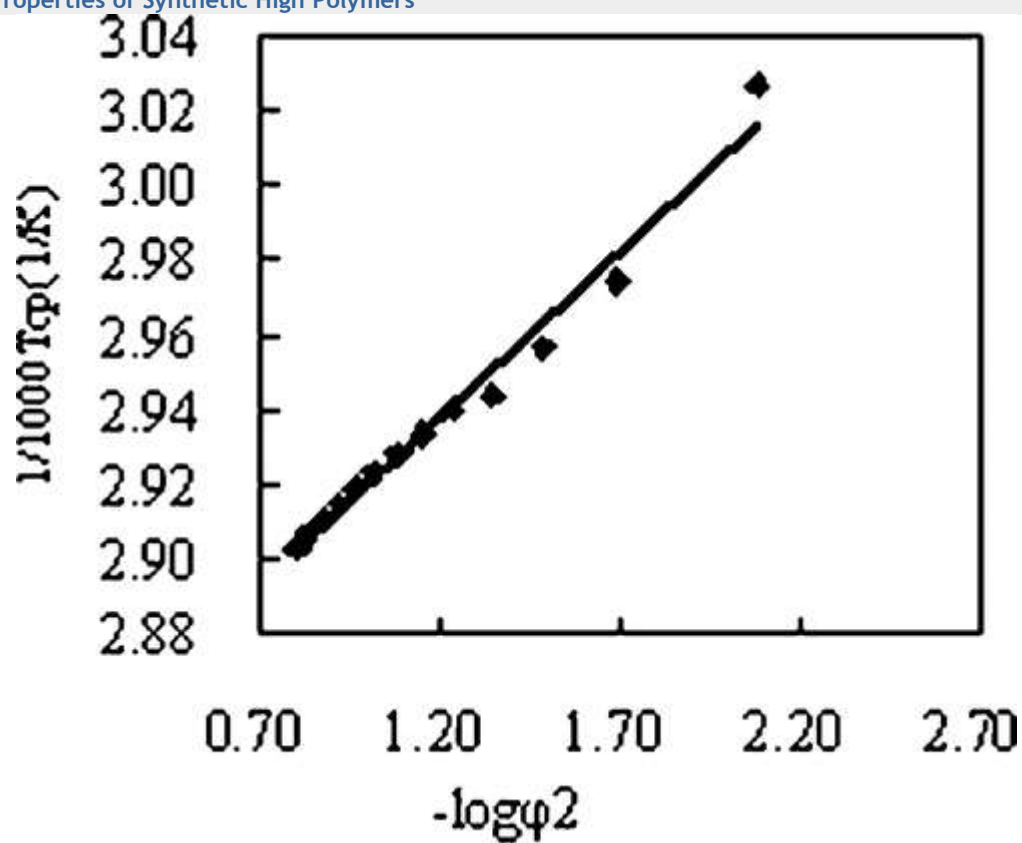
pp 1499-1501

Publication Date (Web): April 6, 2012 (Article)

DOI: 10.1021/je300009n

Section:

Physical Properties of Synthetic High Polymers



Binary Fixed Bed Modeling of Phenol/Aniline Removal from Aqueous Solutions onto Hyper-Cross-Linked Resin (Macronet MN200)

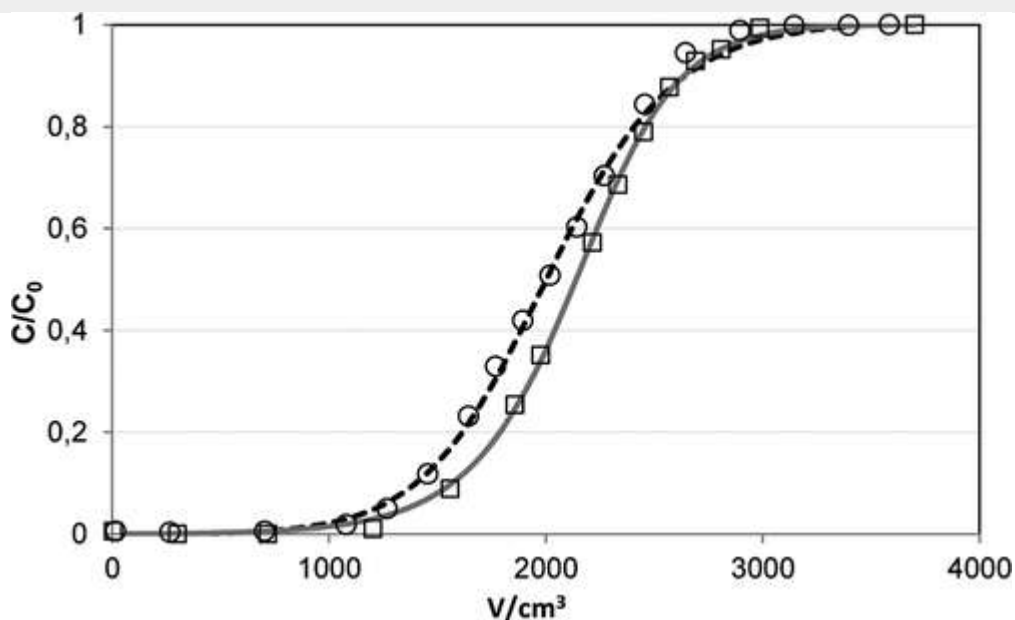
César Valderrama, Jordi Poch, Joan I. Barios, Adriana Farran, and José Luis Cortina

pp 1502-1508

Publication Date (Web): April 24, 2012 (Article)

DOI: 10.1021/je3001415

Section:
Water



Solubility of 6-Chloropyridazin-3-amine in Different Solvents

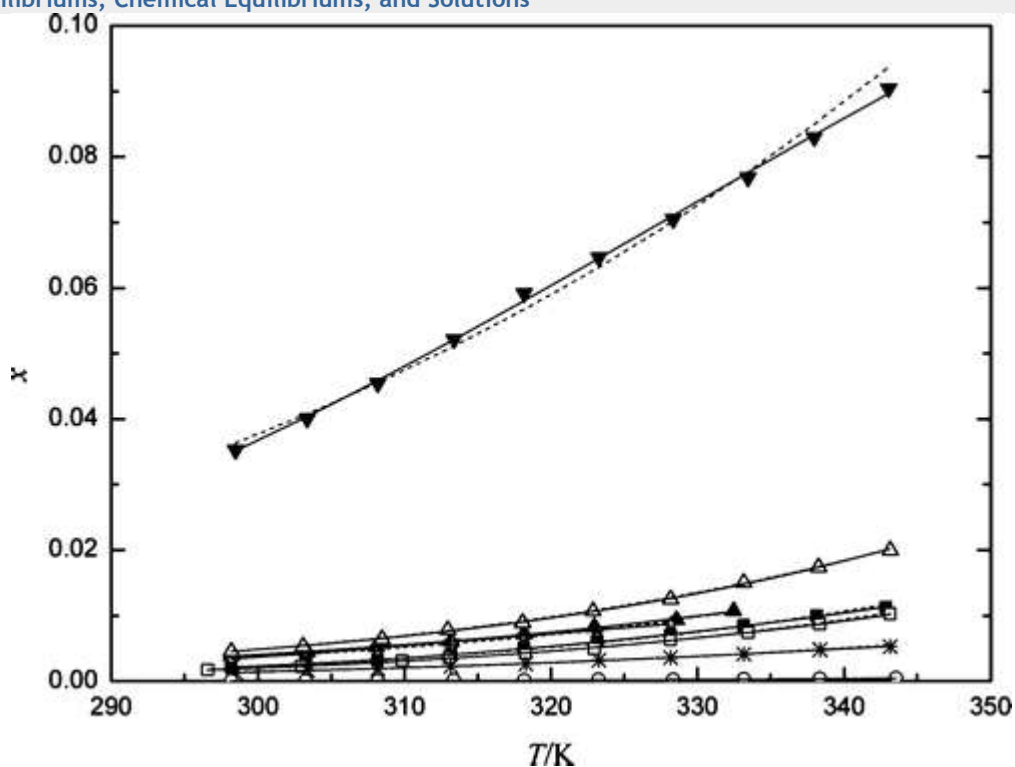
Xin-Xiang Cao, Jin-Qiang Liu, Teng-Teng Lv, and Jing-Cai Yao

pp 1509-1514

Publication Date (Web): April 30, 2012 (Article)

DOI: 10.1021/je3001188

Section:
Phase Equilibria, Chemical Equilibria, and Solutions



Interaction of Some Aminophosphonic Acids with Urea in Aqueous Solutions at 298.15 K

Bartłomiej Palecz, Aleksandra Grala, and Zbigniew Kudzin

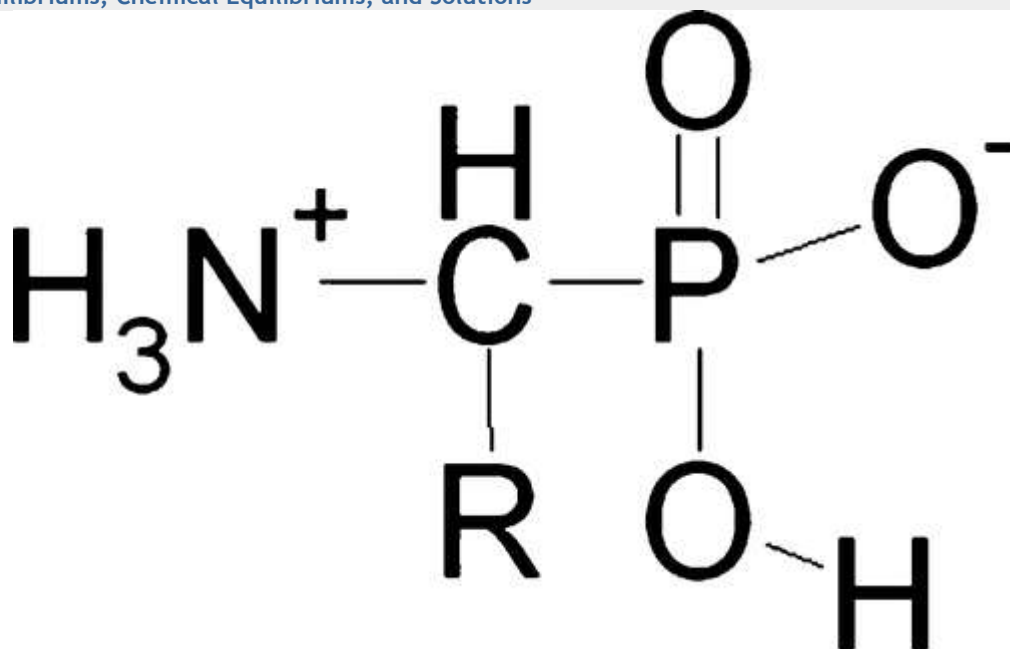
pp 1515-1519

Publication Date (Web): April 18, 2012 (Article)

DOI: 10.1021/je300167m

CCS Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Isobaric Vapor–Liquid Equilibrium Data for the Binary Mixtures 2-Methyl Propan-2-ol with Tetraethoxysilane and 1-Phenyl Ethanone at 95.5 kPa

Mamidipelli Pradeep Kumar, Mamilla Shyamsunder, Bomma Satish Kumar, and Shuwana Tasleem

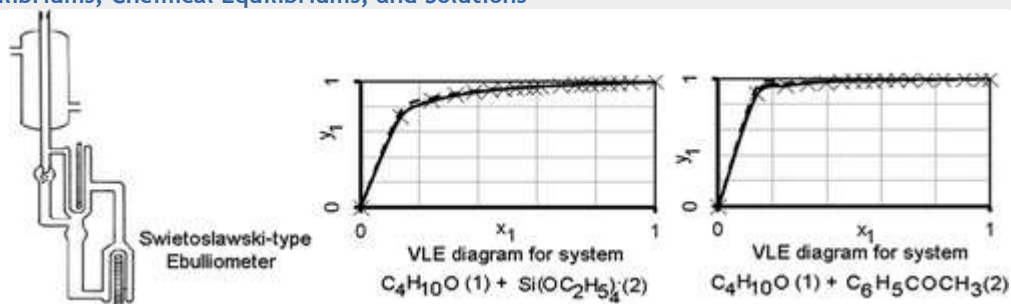
pp 1520-1524

Publication Date (Web): April 26, 2012 (Article)

DOI: 10.1021/je300076y

CCS Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Solubility Advantage of Pyrazine-2-carboxamide: Application of Alternative Solvents on the Way to the Future Pharmaceutical Development

Catarina Lourenço, Catarina I. Melo, Rafał Bogel-Lukasik, and Ewa Bogel-Lukasik

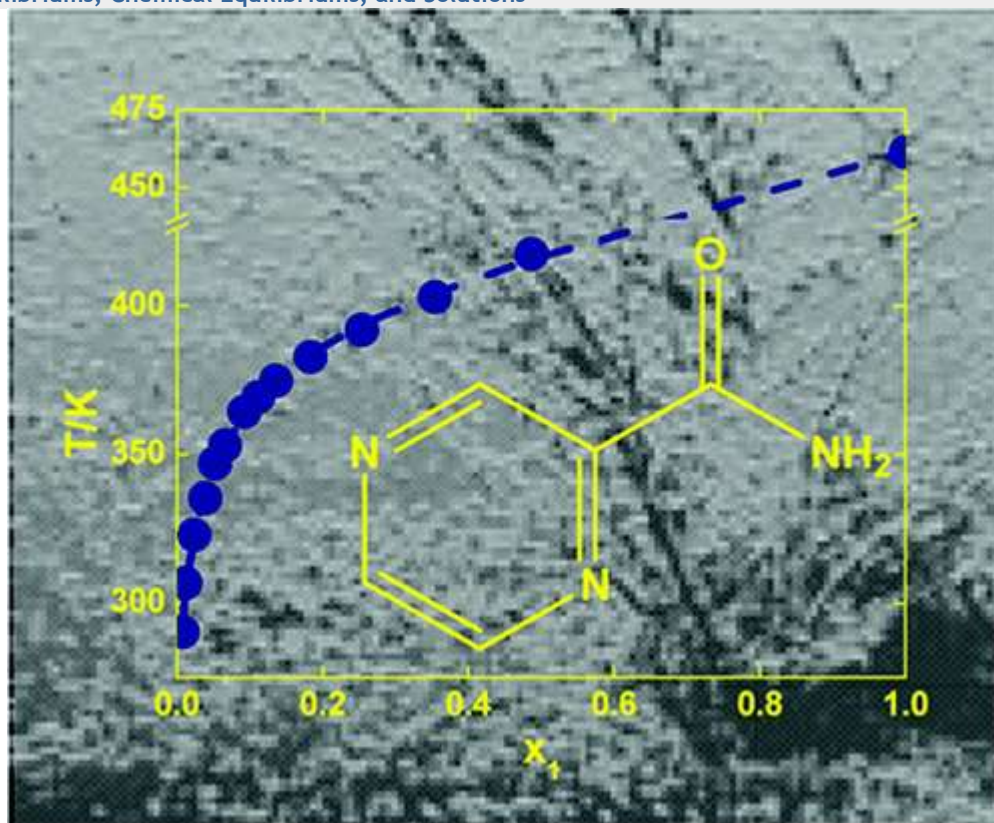
pp 1525-1533

Publication Date (Web): March 22, 2012 (Article)

DOI: 10.1021/je300044x

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Phase Equilibria of H₂S-Hydrocarbons (Propane, *n*-Butane, and *n*-Pentane) Binary Systems at Low Temperatures

Moussa Dicko, Christophe Coquelet, Pascal Theveneau, and Pascal Mougin

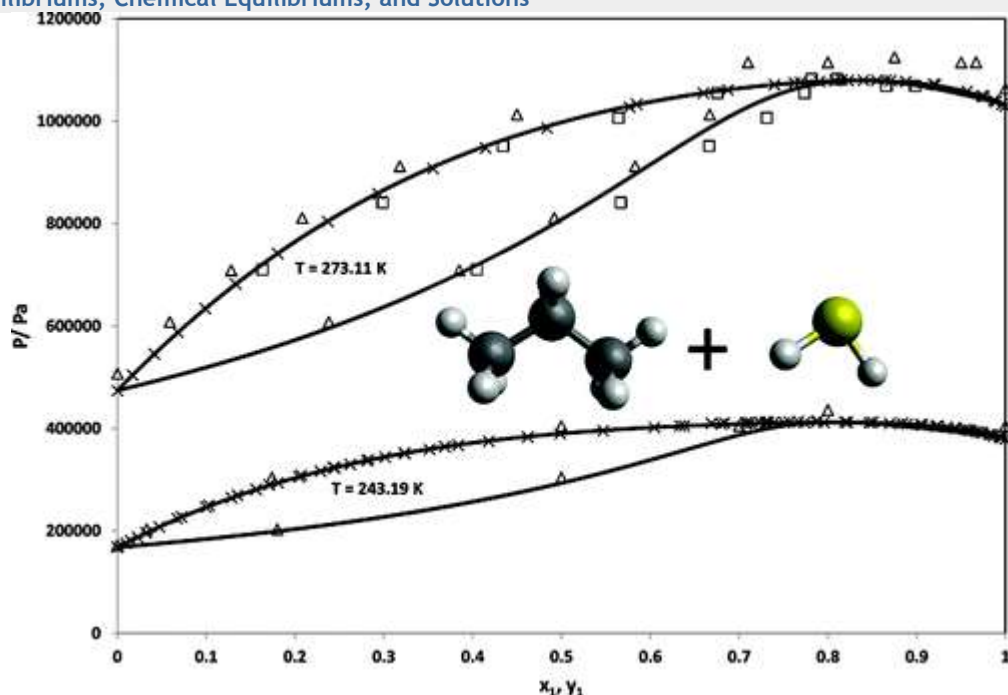
pp 1534-1543

Publication Date (Web): April 19, 2012 (Article)

DOI: 10.1021/je300111m

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Solubility of 2-Butyl-3-benzofuranyl 4-(2-(Diethylamino)ethoxy)-3,5-diiodophenyl Ketone Hydrochloride (Amiodarone HCl) in Ethanol + Water and *N*-Methyl-2-pyrrolidone + Water Mixtures at Various Temperatures

Shadi H. Eghrary, Reza Zarghami, Fleming Martinez, and Abolghasem Jouyban

pp 1544-1550

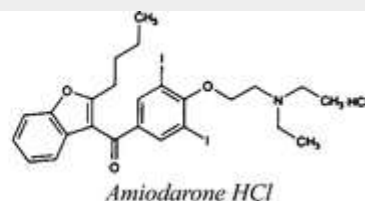
Publication Date (Web): April 10, 2012 (Article)

DOI: 10.1021/je201268b

Section:

Phase Equilibria, Chemical Equilibria, and Solutions

$$\ln X_{m,T}^{Sol} = m_1 \left(A_1 + \frac{B_1}{T} \right) + m_2 \left(A_2 + \frac{B_2}{T} \right) + \frac{m_1 m_2}{T} \sum_{i=0}^2 J_i (m_1 - m_2)^i$$



Adsorption Thermodynamics and Kinetics of *p*-Xylene on Activated Carbon

Ting Qiu, Yu Zeng, Changshen Ye, and Hui Tian

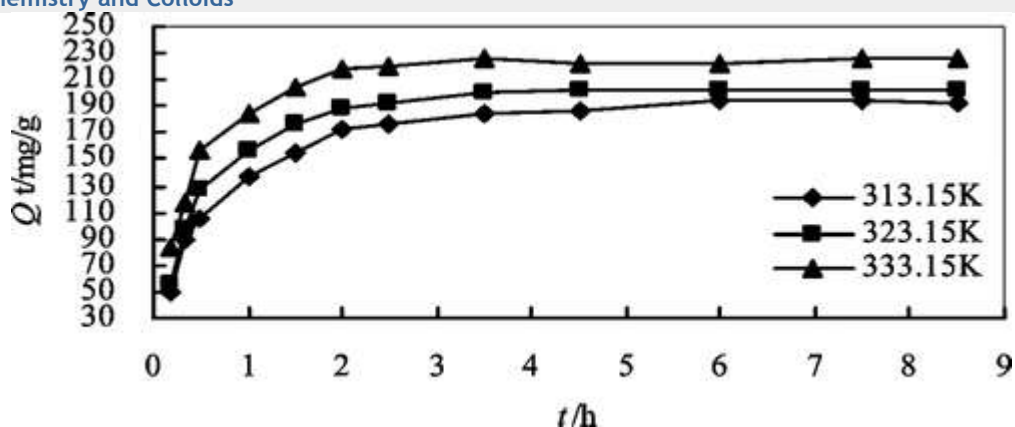
pp 1551-1556

Publication Date (Web): April 10, 2012 (Article)

DOI: 10.1021/jc300138a

CCS Section:

Surface Chemistry and Colloids



Equilibrium Data and Morphology of Tetra-*n*-butyl Ammonium Bromide Semiclathrate Hydrate with Carbon Dioxide

N. Ye and P. Zhang

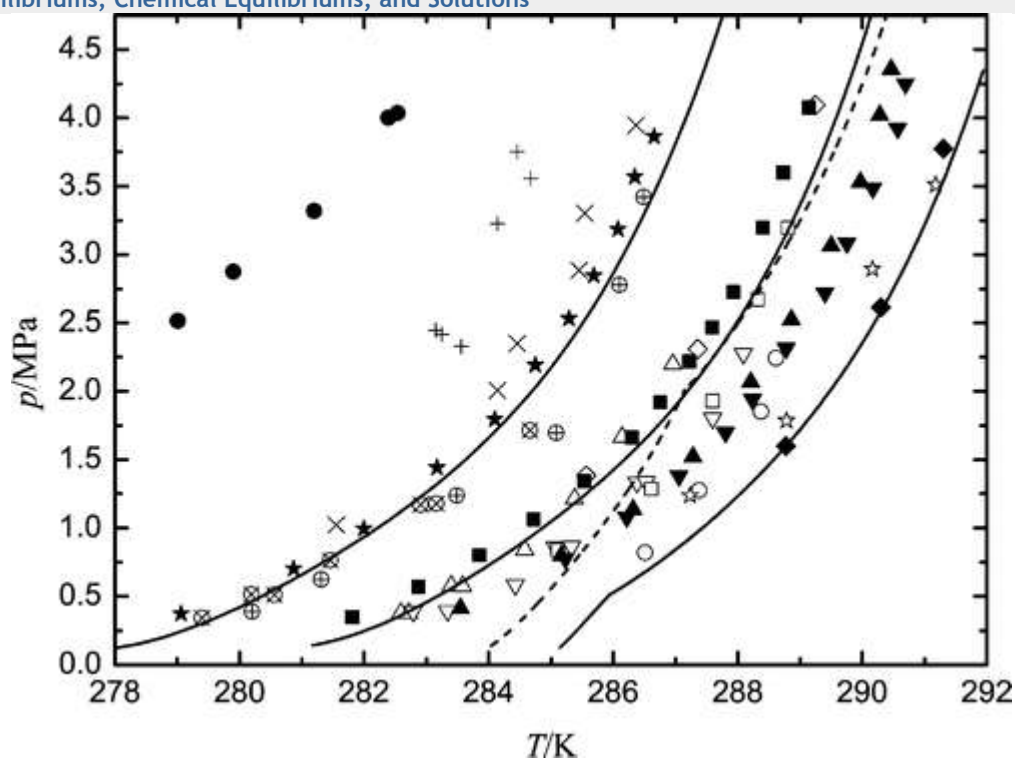
pp 1557-1562

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DOI: 10.1021/jc3001443

CCS Section:

Phase Equilibria, Chemical Equilibria, and Solutions



A Comparative Study on the Adsorption of Acid and Reactive Dyes on Multiwall Carbon Nanotubes in Single and Binary Dye Systems

Shaobin Wang, Choon Wei Ng, Wentai Wang, Qin Li, and Liqing Li

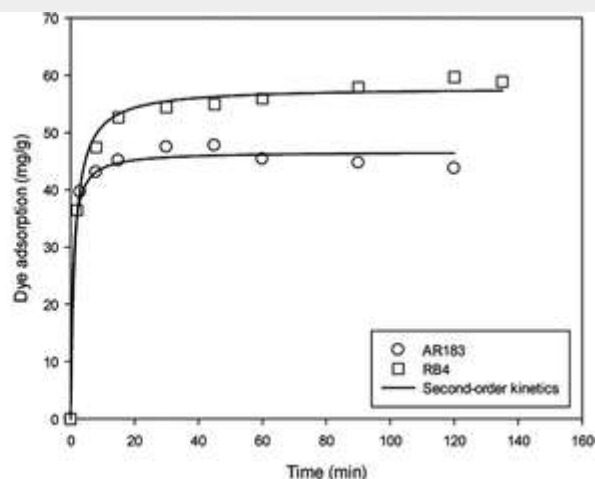
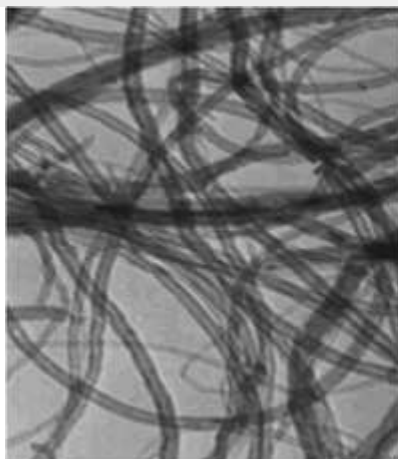
pp 1563-1569

Publication Date (Web): April 25, 2012 (Article)

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Section:

Water



Partial Molar Isentropic Compressions and Partial Molar Volumes of Selected Branched Aliphatic Alcohols at Infinite Dilution in Water at Temperatures from $T = (278 \text{ to } 318) \text{ K}$ and Atmospheric Pressure

Lukáš Šimurka, Ivan Cibulka, and Lubomír Hnědkovský

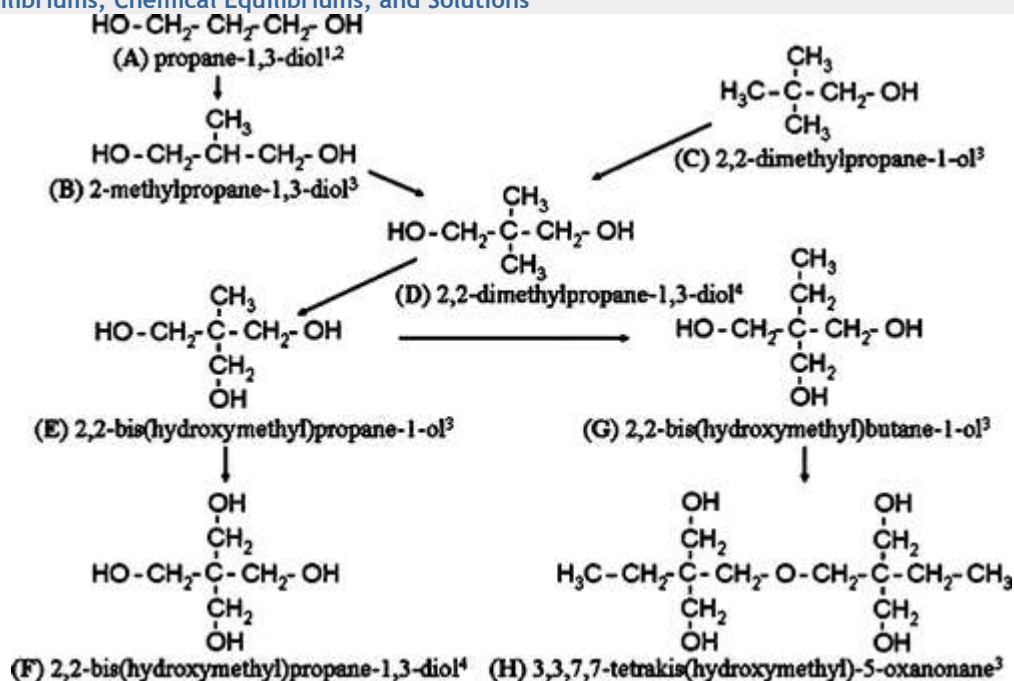
pp 1570-1580

Publication Date (Web): April 18, 2012 (Article)

DOI: 10.1021/je300175w

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Solubilities of 3-Methoxy-*N*-phenylaniline and 3-(Methylthio)-*N*-phenylaniline in Five Organic Solvents (285 K to 333.75 K)

Yin-xia Jia, Chao Qian, Xin-zhi Chen, and Chao-hong He

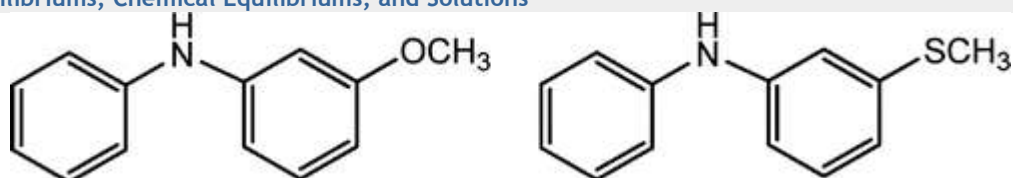
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Publication Date (Web): May 2, 2012 (Article)

DOI: 10.1021/je3001816

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Electrokinetic and Colloidal Properties of Homogenized and Unhomogenized Palygorskite in the Presence of Electrolytes

Jixiang Xu and Aiqin Wang

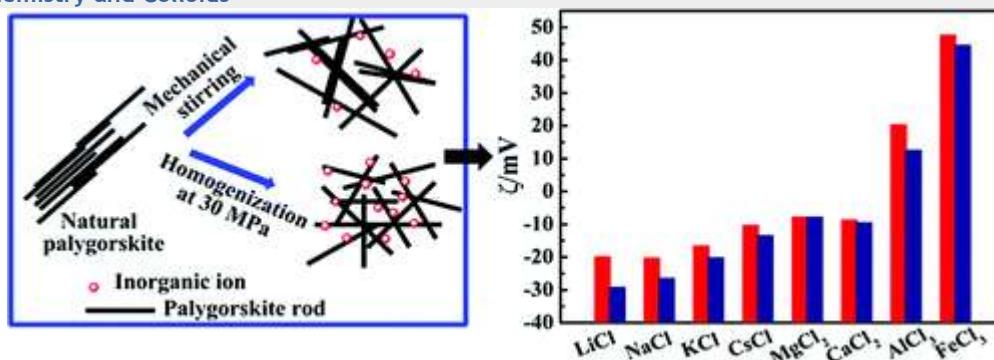
pp 1586-1593

Publication Date (Web): April 5, 2012 (Article)

DOI: 10.1021/je300213u

Section:

Surface Chemistry and Colloids



Vapor Pressure and Evaporation Coefficient Measurements at Elevated Temperatures with a Knudsen Cell and a Quartz Crystal Microbalance: New Data for SiO

Steffen Wetzel, Annemarie Pucci, and Hans-Peter Gail

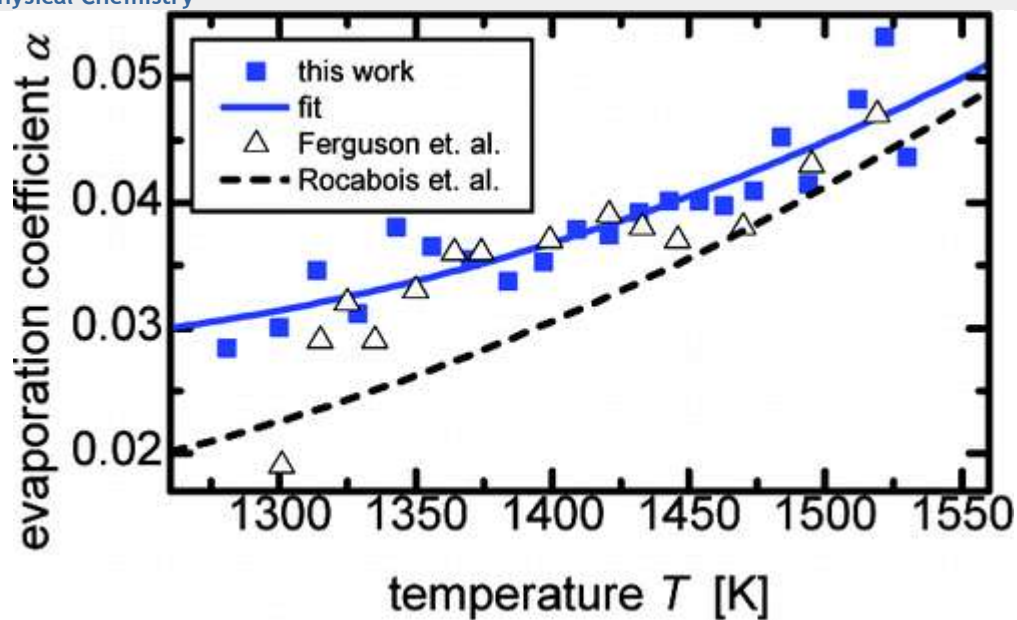
pp 1594-1601

Publication Date (Web): April 26, 2012 (Article)

DOI: 10.1021/je300199a

Section:

General Physical Chemistry



Isobaric Vapor–Liquid Equilibrium for Methanol + Dimethyl Carbonate + 1-Octyl-3-methylimidazolium Tetrafluoroborate

Qunsheng Li, Wei Zhu, Yongquan Fu, Haichuan Wang, Lun Li, and Baohua Wang

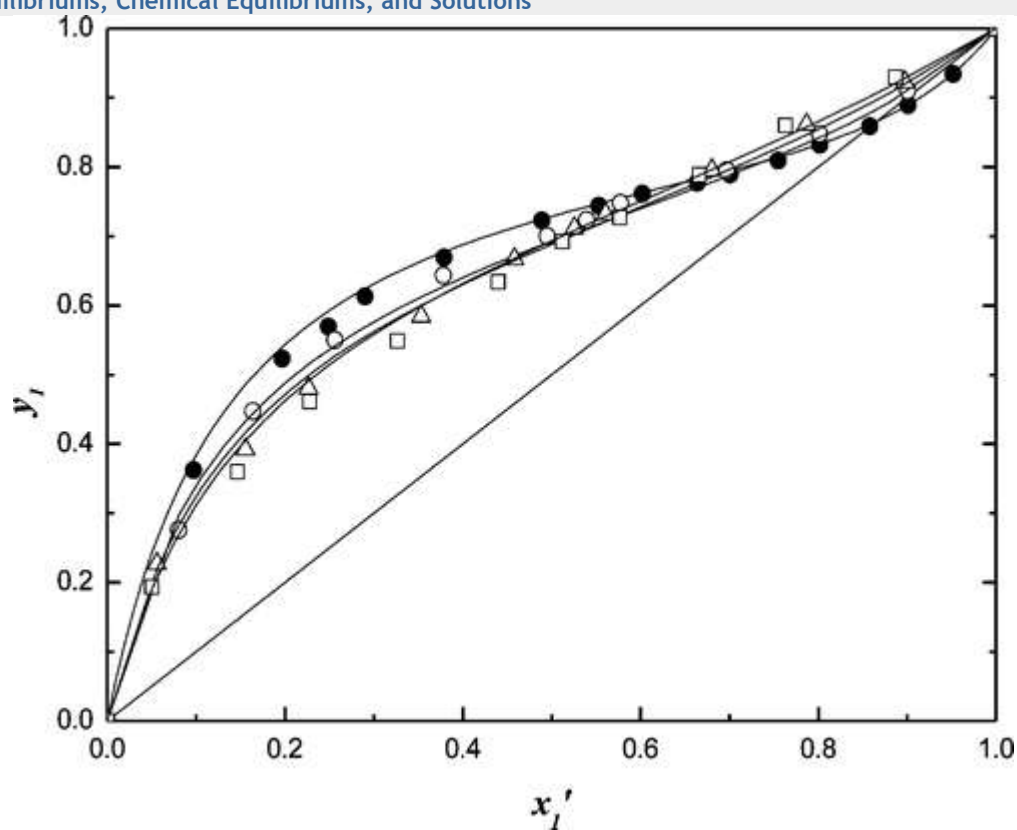
pp 1602-1606

Publication Date (Web): April 30, 2012 (Article)

DOI: 10.1021/je2005402

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Absorption Data and Modeling of Carbon Dioxide in Aqueous Blends of Bis(2-hydroxyethyl)methylamine (MDEA) and 2,2-Iminodiethanol (DEA): 25 % MDEA + 25 % DEA and 30 % MDEA + 20 % DEA

Khalid Osman, Christophe Coquelet, and Deresh Ramjugernath

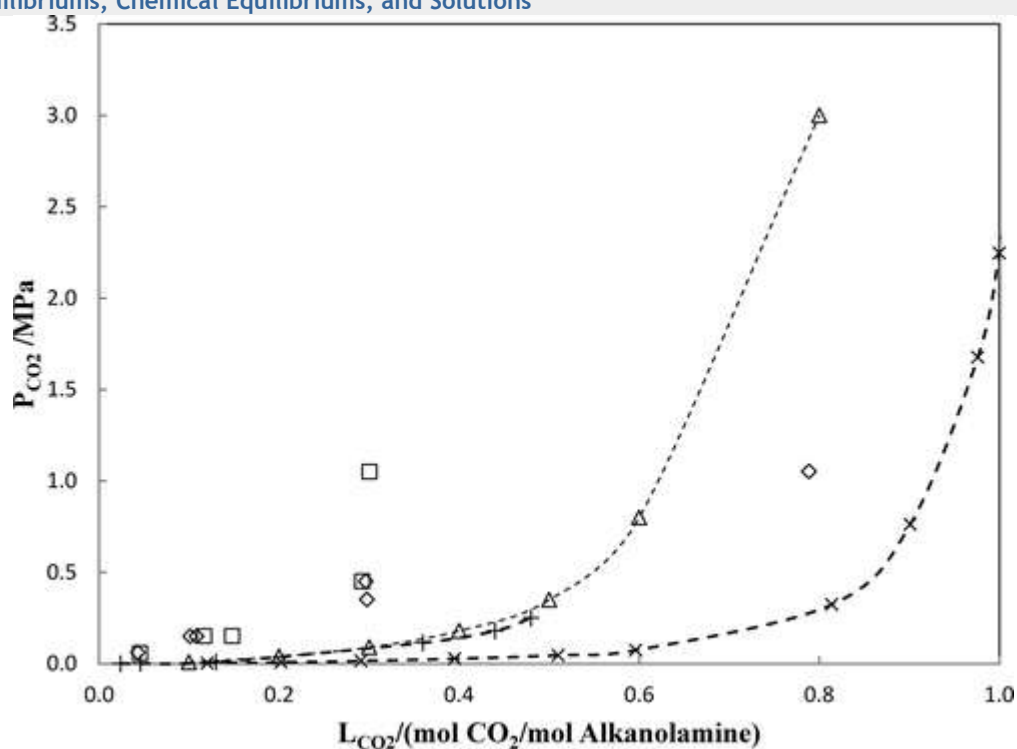
pp 1607-1620

Publication Date (Web): April 18, 2012 (Article)

DOI: 10.1021/je201132d

Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Vapor–Liquid Equilibrium for the Mixture Nitrogen (N_2) + Methane (CH_4) in the Temperature Range of (110 to 125) K

Xiao Hong Han, Yu Jia Zhang, Zan Jun Gao, Ying Jie Xu, Qin Wang, and Guang Ming Chen

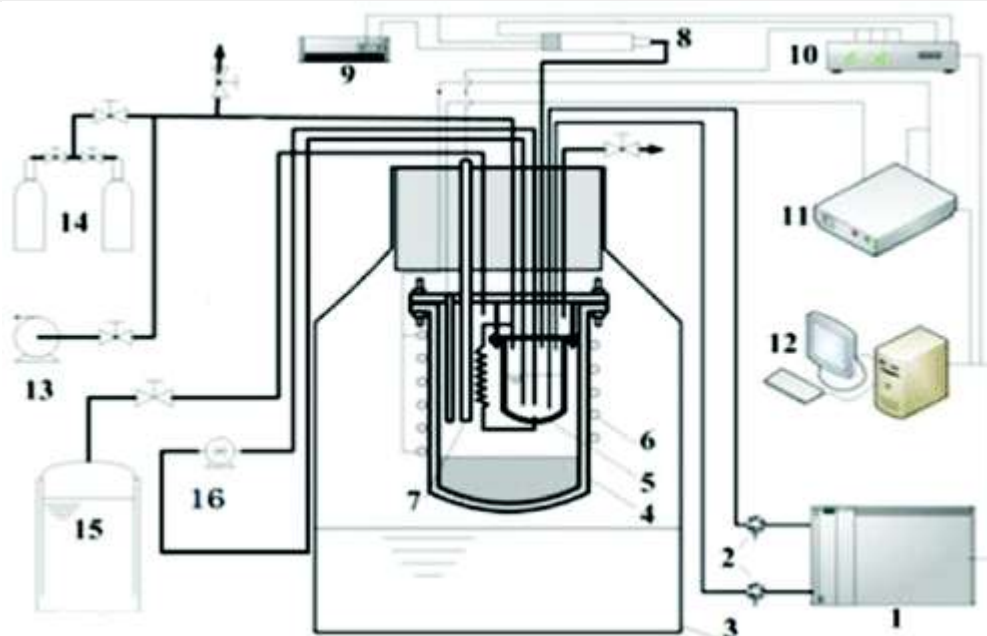
pp 1621-1626

Publication Date (Web): April 12, 2012 (Article)

DOI: 10.1021/je201299u

CCS Section:

Phase Equilibria, Chemical Equilibria, and Solutions



Experimental Study of p – ρ – T Relationship of Compressed Liquid Phase for Octafluoropropane and Two near Azeotropic Ternary HFC/HC Mixtures

Jaroslav Klomfar, Monika Součková, and Jaroslav Pátek

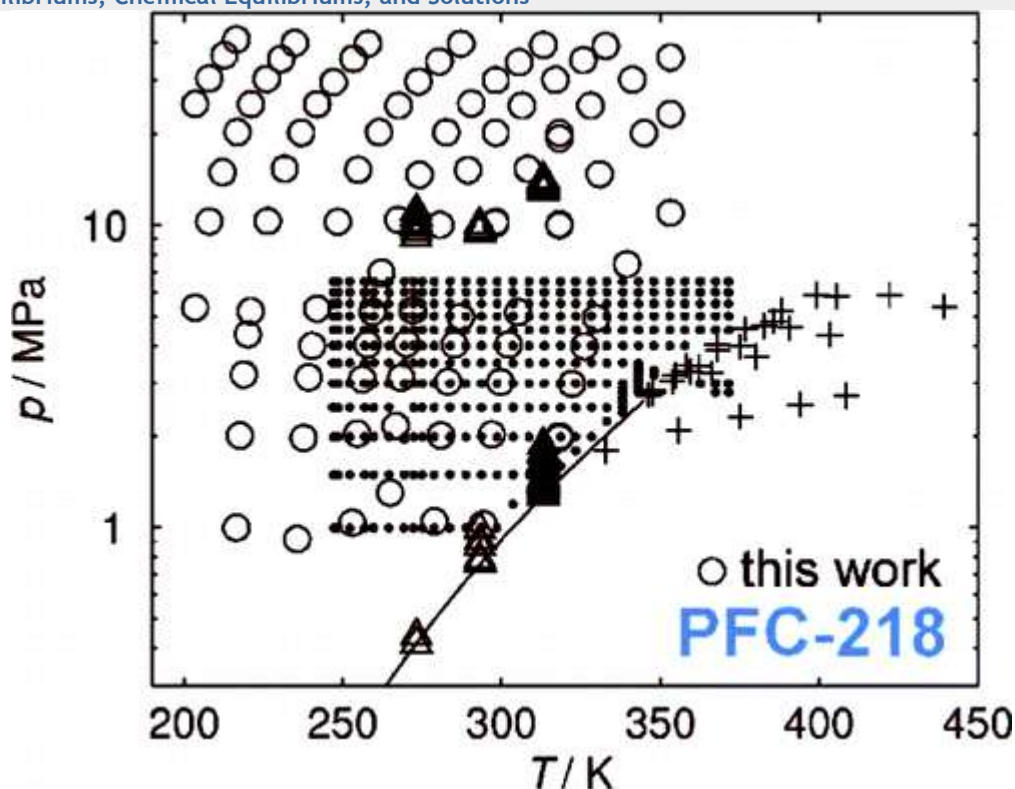
pp 1627–1634

Publication Date (Web): April 19, 2012 (Article)

DOI: 10.1021/je300148f

Section:

Phase Equilibriums, Chemical Equilibriums, and Solutions



ADDITIONS AND CORRECTIONS

Correction to “ P , ρ , and T Measurements of the Limonene + α -Pinene Mixtures”

Elisa Langa, Antonio F. Palavra, Carlos A. Nieto de Castro, and Ana M. Mainar

pp 1635–1635

Publication Date (Web): April 26, 2012 (Addition/Correction)

DOI: 10.1021/je300423h

Section:

Phase Equilibriums, Chemical Equilibriums, and Solutions