



Seventeenth Symposium on Thermophysical Properties

PROGRAM REVISIONS

As of: Tuesday, June 23, 2009

Program corrections and changes are shown below, as far as known to the organizers on June 23, 2009. Further changes *may* be distributed daily to each session room prior to the start of the first morning session and posted on the message board in the Kittredge Commons.

MONDAY

Photothermal and Photoacoustic Techniques 2 (p. 13)

Title Change: Investigation of Light Absorption by Coated Soot Aerosols using Photoacoustic Spectroscopy, *Keith A. Gillis* and Joseph T. Hodges* (p. 13), 5:15 p.m.

Celebratory Session in Honor of J. M.H. (Anneke) Levelt Sengers'

Eightieth Birthday 3 (p. 17)

Title Change: As a Control Parameter of Steam Purity Is Cationic Conductivity a Friend or a Foe?, *Rosa Crovetto** (p. 17), 8:15 p.m.

Instrumentation and Measurement Techniques 1 (p. 18)

Moved: Design of Acoustic Resonators for High Temperatures, *Keith A. Gillis* and Michael R. Moldover* (p. 18)
This paper has been moved to Instrumentation and Measurements 3 session on Tuesday at 2:50 p.m.

Time Change: This paper now starts at 8:35 p.m.

An Apparatus for the Determination of Speeds of Sound of Fluids, *Holger Gedanitz*, Maria Jose Davila and Roland Span* (p. 18)

TUESDAY

Wetting, Interfaces, and Membranes 1 (p. 32)

Withdrawn: Interfacial Properties of Lennard-Jones Fluids on the Fundamentals of van der Waals Gradient Theory, *Hong Lin*, YuanYuan Duan, Qi Min and Jintao Zhang* (p. 32)

Added: Investigating Interfacial Structure and Retention in Reversed-Phase Liquid Chromatography, *Jake Rafferty, Ilja Siepmann* and Mark Schure*

This paper will be presented at 9:55 a.m.

Wetting, Interfaces, and Membranes 2 (p. 39)

Moved: Investigating Interfacial Structure and Retention in Reversed-Phase Liquid Chromatography, *Jake Rafferty, Ilja Siepmann* and Mark Schure* (p. 39)

This paper has been moved to Wetting, Interfaces and Membranes 1, 9:55 a.m.

Time Change: This paper now starts at 11:20 a.m.

Non-Equilibrium Molecular Dynamics Simulations of Model Membrane Permeability, *Peter Davis* and Zhongwu Zhou* (p. 39)

Time Change: This paper now starts at 11:40 a.m.

The Effect of Urea on the Morphology of NaCl Crystals: a Combined Theoretical and Simulation Study, *Paul Smith** (p. 39)

TUESDAY (Continued)

Instrumentation and Measurement Techniques 3 (p. 41)

Added: Design of Acoustic Resonators for High Temperatures, *Keith A. Gillis* and Michael R. Moldover*
This paper will be presented at 2:50 p.m.

Properties of Fossil Fuels (Including Carbon Capture and Sequestration, and Natural Gas Systems) 1 (p. 45)

Withdrawn: Theoretical Study of the Interaction Between Asphaltenes and Methane Hydrates, *Yosadara Ruiz-Morales* and Ascención Romero-Martínez*

Property Needs in Biothermophotonics 2 (p. 46)

Withdrawn: Pulsed Photoacoustic Spectroscopy for Detecting Oral Cancer Early: a Pilot Study, *Krishna K. Mahato*, Kanu Wahi, Smitha Rani, Keerthilat Pai and Satadru Ray* (p. 46)

Time Change: This paper now starts at 2:30 p.m.

Frequency-Domain Photothermoacoustics: Alternative Imaging Modality of Biological Tissues, *Andreas Mandelis* and Sergey Telenkov* (p. 46)

Time Change: This paper now starts at 2:50 p.m.

Photoacoustic Imaging of a Subcutaneous Anomaly Tissue Phantom: Preliminary Results, *Juan David Martinez-Ramirez*, Gerardo Gutiérrez-Juárez and Francisco Javier Gonzalez-Contreras* (p. 46)

WEDNESDAY

Molecular Modeling (Including Simulations) 2 (p. 63)

Speaker Change: Equilibrium and Transport Simulations with a Density-Dependent m-6-8 United Atom Force Field, *Dawn Culley and James Ely** (p. 63)

Molecular Modeling (Including Simulations) 3 (p. 70)

Withdrawn: Solid-Liquid Coexistence and Triple Points of the Lennard-Jones Family of Potentials, *Alauddin Ahmed* and Richard J. Sadus* (p. 70)

Time Change: This paper now starts at 2:30 p.m.

Ab Initio Predictions of Thermophysical Properties of Refrigerant Mixtures, *Mark Oakley and Richard Wheatley**

Time Change: This paper now starts at 2:50 p.m.

First-Principles Calculation of the Third Virial Coefficient of Helium, *Giovanni Garberoglio and Allan Harvey**

WEDNESDAY (Continued)

Properties of Aqueous Systems 5 (p. 71)

Speaker change: On the Critical Locus of Aqueous Electrolyte Solutions at High Temperatures, *Daphne A. Fuentesvilla, Jan V. Sengers* and Mikhail A. Anisimov* (p. 71)

Withdrawn: Heat Capacity Changes for the Ionization of Water from High Dilution Calorimetric Measurements at High Temperatures, *Essmaïl Djamali* and James W. Cobble* (p. 71)

Time Change: This paper now starts at 2:30 p.m.

Walden's Rule Revisited, *Gregory Zimmerman** (p. 71)

Time Change: This paper now starts at 2:50 p.m.

The Effects of Dielectric Constant in Perturbation Theory; For Prediction of Amino Acid Activity Coefficient in Water-Electrolyte-Amino Acid System, *Mohammad Reza Dehghani Sanij*, Esmaeil Salehi and Alireza Fazlali* (p. 71)

Posters (p. 77, p. 85, p. 93, p. 96, p. 107, p. 108, p. 111, p. 112, p. 116, p. 133)

Speaker change: Propagation of Uncertainty in Correlated and Independent Input Quantities According to the Guide to the Expression of Uncertainty in Measurement, *Jesus C. Sanchez-Ochoa, Christian Bouchot* and Abel Zuñiga-Moreno* (p. 77)

Withdrawn: Isothermal Vapor-Liquid Equilibrium for Methane + Mesitylene and Ethane + Mesitylene Binary Systems, *Deng Wei, Wu Xianghong* and Zheng Danxing* (p. 85)

Withdrawn: Application of Virial-Based Mixing Rules for Correlation to Excess Molar Volumes of (trioctylmethylammonium bis(trifluoromethylsulfonyl)imide + Acetates) at Different Temperatures, *Nirmala Deenadayalu and Sabyasachi Sen** (p. 93)

Withdrawn: Synthesis of 1, 3-Dimethylimidazolium Chloride and Saturated Vapor Pressure of Its Aqueous Solution, *Wang Jianzhao, Zheng Danxing*, Fan Lihua and Dong Li* (p. 96)

Withdrawn: Thermal Conductivity and Density of 1-Butyl-3-methylimidazolium Tetrafluoroborate + Methanol Mixture, *Daisuke Tomida*, Tsuyoshi Odashima, Kun Qiao and Chiaki Yokoyama* (p. 96)

Withdrawn: Standard State Thermodynamic Properties of Completely Ionized Aqueous Sodium Sulfate and Sulfuric Acid using High Dilution Calorimetry up to 598.15 K, *Essmaïl Djamali, Keith Chen and James W. Cobble** (p. 107)

Withdrawn: Standard State Thermodynamic Properties of $\text{Ba}^{2+}(\text{aq})$, $\text{Co}^{2+}(\text{aq})$ and $\text{Cu}^{2+}(\text{aq})$ up to 598.15 K, and Temperature Effect on Ligand Field, *Essmaïl Djamali*, Keith Chen, Richard C. Murray Jr., Peter J. Turner and James W. Cobble* (p. 107)

Withdrawn: Measurements of the Internal Pressure of Multicomponent Systems, *Nikolai Polikhronidi*, Rabiyyat Batyrova, Ilmutdin Abdulagatov and Gennadii Stepanov* (p. 108)

Withdrawn: Theoretical Study on the Stability of Methane Hydrates, *Fernando Alvarez-Ramírez, Isidoro García-Cruz, Yosadara Ruiz-Morales* and Ascención Romero-Martínez* (p. 111)

Withdrawn: Measured and Simulated Electronic Absorption and Emission Spectra of Asphaltenes, *Yosadara Ruiz-Morales* and Oliver Mullins* (p. 112)

Withdrawn: Olefin/Paraffin Separation Using PLA-Silver Containing Ionic Liquid Membranes, *Carla Gonçalves, João A. P. Coutinho and Isabel M. Marrucho** (p. 116)

WEDNESDAY (continued)

Posters (p. 77, p. 85, p. 93, p. 96, p. 107, p. 108, p. 111, p. 112, p. 116, p. 133)

Withdrawn: A Hyperbolic Approach from the Hashin and Shtrikman's Equation: Survey of Permittivity Prediction, *T. P. Iglesias**, *João Carlos Reis*, *Gérard Douhéret* and *Michael Davis* (p. 133)

Withdrawn: On the Definition of the Excess Permittivity of a Fluid Mixture: Thermodynamic Formalism, *T. P. Iglesias**, *João Carlos Reis*, *Gérard Douhéret* and *Michael Davis* (p. 133)

Withdrawn: On the Definition of the Excess Permittivity of a Fluid Mixture: Molecular Formalism, *T. P. Iglesias**, *João Carlos Reis* and *Luis Farina-Busto* (p. 133)

Added: Development of a Class Library for Thermophysical Properties Calculation and Analysis, *Jiangtao Wu*, *Weide Chen* and *Yong Zhou**

Added: Getting a Hold of Trace Vapors: Quantifying Analyses of Toxins, *Tara Lovestead** and *Thomas J. Bruno*

Fluid Property Measurements 1 (p. 144)

Speaker change: Image Processing Determination for the Critical Density and Temperature of Carbon Dioxide, *Kazuya Yamamoto*, *Hiroaki Katano**, *Yohei Koyanagi* and *Haruki Sato* (p. 144)

Added: Simultaneous Determination of the Vapor-Liquid Equilibria and Saturation Densities of Carbon Dioxide + Alkanol Systems, *Octavio Elizalde Solis* and *Luis A. Galicia-Luna** to be presented at 9:15 p.m.

Molecular Modeling (Including Simulations) 4 (p. 148)

Withdrawn: Determination of Equation of State Parameters by Molecular Simulation and Application to Systems Containing Polymers, *Alexander Breitholz**, *Jeong Won Kang* and *Ki-Pung Yoo*

THURSDAY

Molecular Modeling (Including Simulations) 5 (p. 155)

Withdrawn: Critical Dynamics of Dimethyl Ether with Hamiltonian Equations of Motion, *Asad Ahmed** and *Jiangtao Wu* (p. 155)

Properties of Biomaterials and Biomedical Systems (p. 157)

Addition: Mechanical Properties of Parylene C Thin Films: a Flexible Packaging/Coating for Active Biomedical Implants, *M. Bai*, *G. White**, *D. Read*, *W. Regnault* and *N. Benetatos*. **starts at 9:35 a.m.**

Time Change: This paper now starts at 9:55 a.m.

Thermal Analysis of Sub-Nanoliter Liquid Samples for Bio-Sensing Applications, *Byoung Kyoo Park*, *Jae Sung Park* and *Dongsik Kim** (p. 157)

Time Change: This paper now starts at 10:15 a.m.

Effects of Nonideality in Vascular Network Response on Heat Transfer in Living Tissue, *Vladimir Bitukov** and *Wassily Lubashevsky* (p. 157)

Properties of Mesoscopic, Micro-heterogeneous, and Strongly Fluctuating Systems 1 (p. 158)

Withdrawn: One-Component and Binary Liquid Coexistence Curves on the Basis of the Van Der Waals Model of Gas Fluctuations, *Alexander Alekhin, Bahythan Zh. Abdikarimov, Leonid A. Bulavin, Yevgeniy G. Rudnikov, Yuriy L. Ostapchuk* and Elena T. Shimanskaya*

Added: Description of Behavior of Pure Fluids in Wide Area of States Including the Critical Point , *Victor G. Martynets*, Petr P. Bezverkhy and Eduard V. Matizen*

This paper will be presented at 9:55 A.M.

Correlations, Equations of State, and Engineering Models 8 (p. 161)

Withdrawn: A Generalized Form of the Redlich-Kister Equation, *David Manley and Sabyasachi Sen** (p. 161)

Added: An Improved Helmholtz Energy Model for Properties of Air and Related Systems, *Jorge Estela-Uribe**
This paper starts at 11:40 a.m.

Properties of Mesoscopic, Micro-heterogeneous, and Strongly Fluctuating Systems 2 (p. 167)

Moved: Description of Behavior of Pure Fluids in Wide Area of States Including the Critical Point , *Victor G. Martynets*, Petr P. Bezverkhy and Eduard V. Matizen*

This paper moved to Properties of Mesoscopic, Micro-heterogeneous, and Strongly Fluctuating Systems 1, Thursday June 25, 9:55 A.M.

Databases and Software 1 (p. 172)

Withdrawn: Simulis® Thermodynamics, Just One More Thermodynamic Package?, *Stéphane Déchelotte*, Alain Vacher and Olivier Baudouin*

Properties for Alternative Energy and Sustainable Development (Including Biofuels) 3 (p. 174. p. 175)

Withdrawn: Surface Tension and Viscosity Measurement of Some Fuels Using the (Surface Laser-Light Scattering) SLLS Method, *Guanjia Zhao, Shengshan Bi* and Jiangtao Wu* (p. 174)

Time Change: This paper now starts at 2:50 p.m.

Thermal Conductivity of Liquid Diethyl Ether, Isopropyl Ether and Butyl Ether from 243 to 373 K at Pressures to 30 MPa, *Xiaojing Li*, Jiangtao Wu, Shan Xie and Zhigang Liu* (p. 175)

Time Change: This paper now starts at 3:10 p.m.

Mass Diffusion Coefficients of Dimethyl Carbonate and Diethyl Carbonate in n-Heptane and in Air, *Mao-gang He*, Qiu Zhong, Ying Guo and Ying Zhang* (p. 175)

Fluid Property Measurements 4 (p. 182, 183)

Moved: Simultaneous Determination of the Vapor-Liquid Equilibria and Saturation Densities of Carbon Dioxide + Alkanol Systems, *Octavio Elizalde Solis and Luis A. Galicia-Luna** (p. 182)

This paper has been moved to Fluid Property Measurements 1, Wed. 9:15 p.m.

Time Change: This paper now starts at 4:35 p.m.

Rapid Measurement of PVT in Heavy Oil System - A Challenge, *Raj S.V. Rajan* and Gerard Korpany* (p. 183)

Time Change: This paper now starts at 4:55 p.m.

Solubility of Gases in Viscous Fluids and Density and Viscosity of Resulting Mixture, *Kenneth Marsh, Anthony Goodwin*, Eric May, Kandil Mohamed, Guillaume Watson and Masead Almotari* (p. 183)

FRIDAY

Correlations, Equations of State, and Engineering Models 10 (p. 189)

Time Change: This paper has been moved to Correlations 8, p 161

An Improved Helmholtz Energy Model for Properties of Air and Related Systems, *Jorge Estela-Uribe**

Time Change: This paper now starts at 8:55 a.m.

Reliable Thermophysical Properties of Gases from Experimental Data and Intermolecular Potential Model, *Takashi Takenobu, Yuji Sasaki and Haruki Sato** (p. 189)

Time Change: This paper now starts at 9:15 a.m.

An Equation of State for Acetic Acid Including a SAFT Term, *Lorenzo Piazza* and Roland Span* (p. 189)

Time Change: This paper now starts at 9:35 a.m.

An Equation of State for the Thermodynamic Properties of Dimethyl Ether, *Yong Zhou* and Jiangtao Wu* (p. 189)

Databases and Software 3 (p. 190)

Withdrawn: Progress of the Network Database System for Thermophysical Properties Data Developed by AIST, *Yuichiro Yamashita*, Kenichi Kobayashi and Tetsuya Baba*

Properties of Refrigerants and Working Fluids 7 (p. 192)

Withdrawn: Isothermal Vapor-Liquid Equilibria for Binary System of Dimethyl Ether + Pentafluoroethane at Different Temperatures, *Jiangguo Yin* and Jiangtao Wu* (p. 192)

Time Change: This paper now starts at 8:55 a.m.

Vapor Pressure for Three Fluorinated Propanes and the Effects of Impurities on Experimental Results, *XiaoJuan Feng*, XinHao Xu, Hong Lin and YuanYuan Duan* (p. 192)

Time Change: This paper now starts at 9:15 a.m.

Isothermal Vapor-Liquid Equilibria for Pentafluoroethane + Propane and Pentafluoroethane + 1,1,1,2,3,3,3-Heptafluoropropane Systems, *ShuXin Hou*, YuanYuan Duan and XiaoDong Wang* (p. 192)

Databases and Software 4 (p. 195)

Presentation Change: This paper has been changed to a poster:

Development of a Class Library for Thermophysical Properties Calculation and Analysis, *Jiangtao Wu, Weide Chen and Yong Zhou**

Thermal Properties of Nanostructured Materials (Including Nanofluids) 5 (p. 200)

Withdrawn: Thermal Conductivity of Cu-Carbon Nanotube Composite Film, *Jung Joon Yoo, Ho-Ki Lyeo*, Jae Yong Song, Sungjun Lee and Jin Yu*

Time Change: This paper now starts at 11:40 a.m.

Thermodynamic Study of New Hydrogen Storage Materials and Phase Change Materials, *Li-Xian Sun* and Fen Xu*