

POSTER SESSION – EQUIFASE 2015

TOPIC 1. Measurement of Thermodynamic Properties. Phase Equilibria and Chemical Equilibria

- P-01 **Density measurements under pressure of di-isopropyl ether + 2-butanol at temperatures up to 393.15 K and at pressures up to 100 MPa**
Mohamed Dakkach², Fatima E. M. Alaoui³, Fernando Aguilar¹, Eduardo Montero¹
¹*Escuela Politécnica Superior, Universidad de Burgos, Spain*
²*Faculty of Sciences, Abdelmalek Essaâdi University, Morocco.*
³*Ecole Nationale des Sciences Appliquées d'El Jadida, Chouaïb Doukkali University, Morocco*
- P-02 **Enzymatic reaction in two phase systems: prediction of equilibrium conversion at equilibrium**
Jose A. Scilipoti, Claudia Nioi, Séverine Camy, Jean-Stéphane Condoret
Université de Toulouse, CNRS-INPT-UPS, Laboratoire de Génie Chimique, France
- P-03 **Aqueous two-phase system of poly(ethylene glycol) 4000 and sodium molybdate at different temperatures**
Katherine Muñoz, Islamán Bannura, Yahaira Barrueto, Katiuska Garnica, Yecid P. Jiménez
Universidad de Antofagasta, Chile
- P-04 **Thermodynamic analysis of ethanol and 1-propanol dehydration via extractive distillation**
Jordi Pla-Franco, Estela Lladosa, Sonia Loras and Juan B. Montón
Dpto. Ingeniería Química, Universitat de València, Spain
- P-05 **Liquid-liquid equilibria for ternary mixture of [hmim⁺][NTf₂⁻] + n-hexane + an organic compound involved in the kinetic resolution of *rac*-2-pentanol**
M. G. Montalbán, C. L. Bolívar, R. Trigo, M. Collado-González, F. Guillermo Díaz Baños and G. Vllora
University of Murcia, Spain
- P-06 **Evaluation of diethyl carbonate and methyl isobutyl ketone as entrainers in 1-hexene + n-hexane mixtures**
Beatriz Marrujo¹, Jordi Pla-Franco², Sonia Loras²
¹*Universidad del Zulia, Maracaibo, Venezuela*
²*Universitat de València, Spain*
- P-07 **Isobaric vapor-liquid equilibrium of binary mixtures HFE 7500 + di-isopropyl ether**
Natalia Muñoz, Adil Srhiyer, Eduardo Montero, Fernando Aguilar
Escuela Politécnica Superior, Universidad de Burgos, Spain

- P-08 **Excess molar Gibbs energies of heptan-2-one + 1,4-dichlorobutane or + 1,6-dichlorohexane. Measurements and predictions**
Ouahiba Tafat-Igoudjilene, A. Ait Kaci¹, J. Jose²
¹*Laboratoire de Thermodynamique et de modélisation moléculaire, Université des Sciences et de la Technologie Houari Boumediene, Algérie*
²*Laboratoire de Chimie Analytique I, Université Claude Bernard, France*
- P-09 **Development of an innovative process of extraction of high purity hydrazine : exploitation of phase equilibria**
Anne-Julie Bougrine¹, Clelia Betton¹, Guy Jacob², Henri Delalu¹
¹*Laboratoire Hydrazines et Composés Energétiques Polyazotés Université Claude Bernard Lyon 1, France*
²*SAFRAN-HERAKLES-Centre de Recherches du Bouchet, France*
- P-10 **Excess molar enthalpies for binary mixtures of N and/or O-heterocyclic compounds with octane isomers at 308.15 K and atmospheric pressure. Experimental results and DISQUAC model analysis**
Farid Brahim Belaribi, Nadia Abdouche, Assia Boussebissi, Ghénima Boukais-Belaribi
Université des Sciences et de la Technologie Houari Boumediene. Algérie
- P-11 **Binary solid-liquid equilibrium of trimyristin + fatty acids**
Flávio Cardoso de Matos, Mariana Conceição da Costa, Eduardo Augusto Caldas Batista
University of Campinas, Brazil
- P-12 **Calorimetric study on the influence of branched-chain fatty alcohol esters as inhibitors of solid-liquid equilibrium of ethylic biodiesel components**
Maria Dolores Robustillo Fuentes¹, Antonio Jose De Almeida Meirelles², Pedro De Alcântara Pessôa Filho¹
¹*Universidade de São Paulo, Brazil*
²*University of Campinas, Brazil*
- P-13 **Phase equilibrium and properties of lithium hydroxide in water + methanol and different temperatures**
Teófilo Graber¹, Elsa Flores², Maria Elisa Taboada¹
¹*Universidad de Antofagasta, Chile*
²*CICITEM, Chile*
- P-14 **Comparison of two indirect methods for determining liquid-liquid equilibria of sunflower seed oil (1) + n-hexanal or 2-nonenal (2) + anhydrous ethanol (3) at 293.2 K**
Perci Homrich, Roberta Ceriani
University of Campinas, Brazil

- P-15 **Temperature and water content effect on viscosity and conductivity of protic ionic liquids based on N-methyl-2-hydroxyethylammonium cation**
Gala Rosales, Fabio Costa, Flora Alves, Jaime Boaventura and Silvana Mattedi
Federal University of Bahia, Brazil
- P-16 **Thermophysical characterization of peloids from Chilca (Perú) for therapeutics uses**
Carmen P. Gómez, Lourdes Mourelle, Cristina Fernández, Dolores Fernandez-Marcos, José Luis Legido
University of Vigo, Spain
- P-17 **Solid-liquid equilibrium in lysozyme precipitation with biodegradable salts**
José Sebastián López Vélez, Pedro de Alcântara Pessôa Filho
Universidade de São Paulo, Brazil
- P-18 **Surface tension for the ternary system dimethyl carbonate + p-xylene+ n-octane from 288.15 K – 308.15 K**
Ana Gayol¹, Lidia Casás², Raquel E. Martini³, Alfonsina E. Andreatta⁴, José Luis Legido¹
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⁴Universidad Tecnológica Nacional Facultad Regional San Francisco, Córdoba, Argentina
- P-19 **Experimental and theoretical study of surface tension and density of 1,2-dimethylbenzene with alkanes at 298.15K**
Alfonsina E. Andreatta³, Raquel E. Martini², José L. Legido¹, Lidia Casás⁴
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⁴Laboratoire de Thermique, Energétique et Procédés (LaTEP), ENSGTI – UPPA, France

- P-20 Phase equilibria of glycols and hydrocarbon: experimental measurements and modeling with the GCA-EoS**
Mariana González Prieto¹, Mark D. Williams-Wynn², Indra Bahadur², Francisco A. Sánchez¹, Selva Pereda¹, Amir H. Mohammadi², Deresh Ramjugernath²
¹*Planta Piloto de Ingeniería Química (PLAPIQUI - UNS - CONICET), Argentina.*
²*Thermodynamics Research Unit, School of Engineering, University of KwaZulu-Natal, South Africa*
- P-21 The effect of propanol on the solubility of acidic copper sulfate solutions at 298.15K**
María Elisa Taboada², Martha Claros¹, Elsa K. Flores², Teófilo A. Graber², Silvia Bolado³
¹*Departamento de Ingeniería Química, Universidad de Antofagasta, Chile*
²*Centro de Investigación Científico y Tecnológico para la Minería (CICITEM R10C1004), Chile*
³*Dpto. de Ingeniería Química y Tecnología del Medio Ambiente. Universidad de Valladolid, Spain*
- P-22 Use of distilled crude oil fractions to describe phase behavior of crude oil in carbon dioxide**
Marcos A. Lucas, Rafael B. M. Nunes, Cláudio Dariva, Montserrat F. Heredia, Alexandre F. Santos, Elton Franceschi, Gustavo R. Borges
Núcleo de Estudos em Sistemas Coloidais – NUESC/ITP, Programa de Pós Graduação em Engenharia de Processos – PEP, Universidade Tiradentes – UNIT, Brazil
- P-23 Synthesis and solubility measurement of 2-methyl-1,4-naphthoquinone (menadione) derivatives in supercritical carbon dioxide**
Adolfo L. Cabrera¹, Flavia C. Zacconi², José M. del Valle² and Juan C. de la Fuente²
¹*Universidad Técnica Federico Santa María, Chile*
²*Pontificia Universidad Católica de Chile, Chile*
- P-24 Vapor + liquid equilibria at high-pressure for ternary systems (e)-2-hexenal or hexanal + carbon dioxide + water: measure of partition coefficients**
Arturo Bejarano¹, Pablo López², José M. de Valle¹, and Juan C. de la Fuente³
¹*Pontificia Universidad Católica de Chile, Chile*
²*Universidad Técnica Federico Santa María, Chile*
³*Centro regional de estudios en alimentos saludables CREAS, Chile*

- P-25 **Solubility of carbon dioxide in systems containing MEG/Water/CaCO₃**
Fabiane Serpa, Reginaldo Vidal, João Amaral-Filho, Jailton Nascimento, Camila Figueiredo, Giancarlo Salazar-Banda, Elton Franceschi, Gustavo Borges and Cláudio Dariva
Universidade Tiradentes, Brazil
- P-26 **Analysis of surface tension variation with temperature for n-alkane and 1-alkanol**
M.M Mato, J. Cerqueiro, J. García, J.L. Legido
Universidad de Vigo, Spain
- P-27 **The liquid-liquid equilibrium for a ternary mixture composed of water, sulfolane and n-hexane at temperatures of 293.15, 303.15 and 313.15K**
Fernanda Ganem, João Paulo Santos, Luiz Mário Nelson Góis and Silvana Mattedi
Federal University of Bahia, Brazil
- P-28 **Study of temperature and water content effect on viscosity, density and speed of sound for protic ionic liquids based on bis(2-hydroxyethylammonium) cation**
João Paulo Santos, Dheiver F. Santos, Fábio Costa, Alexander Zimmermann, Jaime Boaventura and Silvana Mattedi
Federal University of Bahia, Brazil
- P-29 **Coupled processes as the basis of biodiesel production**
Alexandra Golikova, Anna Sadaeva, Maria Toikka and Maya Trofimova
Saint-Petersburg State University, Russia
- P-30 **High pressure phase behavior of carbon dioxide, 2-propanone and 4-nitrobenzaldehyde**
Técio Santos Bastos¹, Gustavo Rodrigues Borges¹, Cláudio Dariva¹, Reinaldo Bazito², Refael Francisco Cassaro², Elton Franceschi¹
¹*Universidade Tiradentes, Brazil*
²*Instituto de Química, Universidade de São Paulo, Brazil*
- P-31 **The salt effect on the solubility of glycyglycine and n-acetyl-glycine**
Olga Ferreira, Yoselyn S. Santos, Ana M. Marafona, Mónica P. Gonçalves and Simao Pinho
Instituto Politécnico de Bragança (LSRE_IPB), Portugal
- P-32 **Measurement of ibuprofen - supercritical carbon dioxide phase equilibrium**
Antonio Montes, Clara Pereyra and Enrique J. Martínez de la Ossa
Department of Chemical Engineering and Food Technology, University of Cádiz, Spain
- P-33 **Determination of liquid-liquid-solid equilibrium data of the system water + 2-propanol + 1-undecanol at different temperatures and comparison**

with the system water + ethanol + 1-undecanol

*Vicente Gomis¹, M^a Dolores Saquete¹, Alicia Font¹, Nuria Boluda-Botella¹,
Jorge García-Cano¹ and Kerry Davidson²*

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Scotland*

P-34 The use of heavy alcohols in the ethanol dehydration: liquid-liquid-solid equilibrium data of the ternary system water + ethanol + 1-undecanol at different temperatures

*Vicente Gomis¹, M^a Dolores Saquete¹, Alicia Font¹, Nuria Boluda-Botella¹,
Jorge García-Cano¹ and Julie Crichton²*

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Scotland*

P-35 Determination of the vapor-liquid-liquid-solid equilibrium of water + NaCl + 1-butanol at 101.3 kPa

Jorge García-Cano, Vicente Gomis, Juan Carlos Asensi.

Department of Chemical Engineering, University of Alicante, Spain

TOPIC 2. Theory and Modelling: Statistical Thermodynamic, Equations of State, Activity Coefficient Models, Molecular Simulation and Multiscale Simulation

P-36 Evaluating ionic Gibbs energy of hydration using the Q-electrolattice equation of state

André Zuber¹ and Marcelo Castier²

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² *Texas A&M University at Qatar, Qatar*

P-37 Thermodynamic properties of C₆₀ fullerene from an advanced perturbation theory

Julio Largo and J. Ramón Solana

Departamento de Física Aplicada. Universidad de Cantabria, Spain

P-38 Binaries and ternaries phase diagrams for mixtures of vegetables oils, alcohols and co-solvents

Kayo Santana, Sarah Arvelos, and Lucienne L. Romanielo

Universidade Federal de Uberlândia, Brazil

P-39 A new approach to modelling the equilibrium conditions of TBAB semi-clathrates formed in the presence of pure gases and gas mixtures

Matthew Clarke and Marlon Garcia

University of Calgary, Canada

P-40 Molecular dynamics simulation studies of the interactions in amino acid-based ionic liquids

Diana Ruivo¹, Karina Shimizu², José M.S.S. Esperança¹, José N. Canongia Lopes^{1,2}, Luís Paulo N. Rebelo¹

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- P-41 A modified multi-site occupancy model for heterogeneous surfaces**
Sarah Arvelos and Lucienne L. Romanielo
Universidade Federal de Uberlândia, Brazil
- P-42 Activity coefficients of LiClO₄ in ionic liquid**
Jaime W. Morales
Escuela de Ingeniería Química/Pontificia Universidad Católica de Valparaíso, Chile
- P-43 Molecular dynamics simulation of Henry's constant of CO₂ in ionic liquids using Multistate Bennett Acceptance Ratio**
Dheiver Santos¹, Guilherme Carneiro², Charles Abreu², Frederico W. Tavares², Silvana Mattedi¹
¹Federal University of Bahia, Brazil
²Federal University of Rio de Janeiro, Rio de Janeiro, Brazil
- P-44 Development of a thermodynamic model for fluids confined in spherical pores**
Michelle D'Lima, Marcelo Castier
Texas A&M University at Qatar, Qatar
- P-45 Molecular simulation of structural relaxation of asphaltene aggregates in presence of resin**
Toshimasa Takanohashi¹, Shinya Sato¹ and Ryuzo Tanaka²
¹National Institute of Advanced Industrial Science and Technology, Japan
²Japan Petroleum Energy Center, Japan
- P-46 Characterization of the heterogeneous region of computed solid-fluid equilibrium isopleths**
Sabrina Belén Rodríguez-Reartes, Marcelo S. Zabaloy
Departamento de Ingeniería Química - Universidad Nacional del Sur, Argentina
- P-47 A new reduction techniques for fast compositional reservoir simulation with cubic EoS**
Mehdi Assareh¹, Cyrus Ghotbi² Mahmoud Reza Pishvaie²
¹School of Chemical Engineering, Iran University of Science and Technology, Tehran, Iran
²Department of Chemical and Petroleum Engineering, Sharif University of Technology, Tehran, Iran
- P-48 Calculation of complex phase equilibrium isotherms in ternary systems**
Gerardo O. Pisoni¹, Martín Cismondi², Lucio Cardozo-Filho¹, Marcelo S.

Zabaloy³

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- P-49 **A New Parameterization for Cubic EoS from Single-Phase Properties**
David Santos, Márcio Paredes and Eduardo Lima
Universidade do Estado do Rio de Janeiro, Brazil
- P-50 **Thermodynamic modeling of speed of sound and density at high pressures for (tetralin/n-hexadecane) system with SAFT, PHCT and PFP equations of state**
Fábio Nascimento, Márcio Paredes and Fernando Pessoa
Universidade do Estado do Rio de Janeiro, Brazil
- P-51 **Evaluation of COSMO-RS for VLE prediction of the system 1,8-cineole+propan-1-ol**
José F. Martínez-López¹, Pascual Pérez¹, Elisa Langa², José S. Urieta¹, Ana M. Mainar¹
¹ *Aragon Institute for Engineering Research (I3A), Universidad de Zaragoza, Spain*
² *Facultad de Ciencias de la Salud, Universidad San Jorge, Spain*
- P-52 **Direct detection of double retrograde behavior for equation of state models**
Juan I. Ramello¹, Juan M. Milanese¹, Gerardo O. Pisoni², Martín Cismondi¹, Marcelo S. Zabaloy²
¹ *IDTQ-CONICET, Universidad Nacional de Córdoba, Argentina*
² *Planta Piloto de Ing. Química/ Departamento de Ingeniería Química, UNS, CONICET, Argentina*
- P-53 **Simultaneous ternary LLV and LV equilibrium correlation. modification of the NRTL equation for improved calculations**
Antonio Marcilla, Juan A. Reyes-Labarta and María del Mar Olaya.
Department of Chemical Engineering. University of Alicante, Spain
- P-54 **Modification of the NRTL equation for improved VLE calculations in ternary systems**
Antonio Marcilla, Juan A. Reyes-Labarta and María del Mar Olaya.
Department of Chemical Engineering. University of Alicante, Spain
- P-55 **Refreshing the relevance of analyzing the topology of the GM function in the phase equilibrium correlation data**
Antonio Marcilla, Juan A. Reyes-Labarta and María del Mar Olaya.
Department of Chemical Engineering. University of Alicante, Spain
- P-56 **Improved VLE and VLLE calculations in Azeotropic and Non-azeotropic systems (II). Effect of the vapor and total pressure**
Antonio Marcilla, Juan A. Reyes-Labarta and María del Mar Olaya

Department of Chemical Engineering, University of Alicante, Spain

TOPIC 3. Alternative solvents. Supercritical fluids. Ionic liquids

- P-57 Study of the suitability of two ammonium based-ionic liquids for the extraction of benzene from its mixtures with aliphatic hydrocarbons**
Patricia F. Requejo, Elena Gómez, Noelia Calvar and Ángeles Domínguez
University of Vigo, Spain
- P-58 Spectroscopic studies of phase behaviour in nanopores: toward supercritical fluid electrodeposition**
Ashley Love, Xue-Han, Kie Jie and Michael George
University of Nottingham, United Kingdom
- P-59 Liquid-vapor equilibrium modeling of binary mixtures involving ionic liquids and supercritical fluids using two Gibbs Free Energy models**
Pedro Arce¹, Pedro Robles², Luis Cisternas²
¹University of São Paulo, Brazil
²University of Antofagasta, Chile
- P-60 Liquid-liquid equilibria of water + ethanol + 1-butyl-1-methylpyrrolidinium bis(trifluoromethanesulfonyl)imide ternary system**
Amparo Cháfer, Javier de la Torre, Estela Lladosa and Juan B. Montón
University of Valencia, Spain
- P-61 Prediction of liquid-liquid equilibrium for binary and ternary systems containing 1-alkyl-3-methylimidazolium bis[(trifluoromethyl)sulfonyl]imide using the ASOG method**
Pedro Robles and Luis Cisternas
University of Antofagasta, Chile
- P-62 Toxicity of environmentally-friendly ionic liquids**
Nicole S. M. Vieira, Fátima Moscoso, Patrícia M. Reis, João M. M. Araújo, José N. Canongia Lopes, Ana B. Pereiro, José M. S. S. Esperança, Luís Paulo N. Rebelo
Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa, Portugal
- P-63 Thermophysical characterization and partition properties of fluorinated ionic liquids**
Nicole S. M. Vieira¹, Patrícia M. Reis¹, João M. M. Araújo¹, Karina Shimizu², José N. Canongia Lopes^{1,2}, José M. S. S. Esperança¹, Ana B. Pereiro¹, Luís Paulo N. Rebelo¹
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²Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Portugal
- P-64 Apparent molar volumes of ionic liquids + methanol/ethanol at 298.15 K**
Rafaela Rocha Pinto¹, Silvana Mattedi², Martin Aznar¹
¹Department of Chemical Engineering, University of Campinas, Brazil

²*Department of Chemical Engineering, Federal University of Bahia, Brazil*

- P-65 **Aggregation behavior of [C₁₂mim][OAc] surface active ionic liquid and dynamic interfacial tension in systems with crude oil and water/brine**
Iago Rodríguez-Palmeiro, Iria Rodríguez-Escontrela, Oscar Rodríguez, Alberto Arce, Ana Soto
University of Santiago de Compostela, Spain
- P-66 **Characterisation of mixtures of the ionic liquid 1-ethyl-3-methylimidazolium acetate with light alkanols**
María C. Castro, Héctor Rodríguez, Alberto Arce, Ana Soto
Department of Chemical Engineering, University of Santiago de Compostela, Spain
- P-67 **Molecular design of carbon dioxide physical absorption solvents**
Francisco Sánchez, Selva Pereda, Esteban A. Brignole
PLAPIQUI - UNS CONICET, Argentina
- P-68 **Influence of water concentration in the viscosities and densities of cellulose dissolving ionic liquids**
Cristina Jiménez de la Parra, Johnny R. Zambrano, M^a Dolores Bermejo, Ángel Martín, M^a José Cocero, José J. Segovia
University of Valladolid, Spain
- P-69 **Solubility of polycyclic aromatic hydrocarbons in ionic liquids**
Anabela. J. L. Costa, José N. Canongia Lopes, José M. S. S. Esperança, Luís Paulo N. Rebelo
Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa, Portugal
- P-70 **Ionic liquids as co-solvents for polyaromatic hydrocarbons solubilisation in water**
Fátima Moscoso, Ana B. Pereiro, José N. Canongia Lopes, José M. S. S. Esperança, Luís Paulo N. Rebelo
Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa, Portugal
- P-71 **Palladium(II) hexafluoroacetylacetonate [Pd(hfac)₂] impregnation on silica [SiO₂] using supercritical carbon dioxide [CO₂]**
Alexander Junges¹, Bruna de Araujo Queiroz¹, Cláudio Dariva¹, Sílvia Maria Egues Dariva¹, Juliana Faccin de Conto Borges¹, Gustavo Borges, Eunice Valduga², Elton Franceschi¹
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²*Departamento de Engenharia de Alimentos, Universidade Regional Integrada do Alto Uruguai e das Missões, Brazil*
- P-72 **Silica (SiO₂) microparticles precipitation using supercritical carbon dioxide (CO₂) as anti solvent by SEDS technique**
Alexander Junges¹, Cláudio Dariva¹, Gustavo R. Borges¹, Sílvia M. Egues

Dariva¹, Eunice Valduga², Marcos Hiroiuqui Kunita³, Elton Franceschi¹
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P-73 Developing supercritical antisolvent fractionation to obtain bioactives from *Crocus sativus* corms

Viviana Hinojosa¹, Leidy J. Jiménez-Coqueco¹, A. González-Coloma², Omar Santana-Méridas³, José S. Urieta¹, Juan I. Pardo¹, Ana M. Mainar¹
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³*Departamento de Cultivos Herbáceos / Centro Agrario de Albadalejito, Cuenca, Spain*

P-74 Supercritical fractionation of antioxidants from algerian *Opuntia ficus-indica* (L.) Mill. seeds

Souad Khaled¹, Khodir Madani¹, José S. Urieta², Ana M. Mainar¹
¹*Laboratory of Biomathematics, Biochemistry, biophysics and Scientometrics, University of Bejaia, Algeria*
²*Aragon Institute for Engineering Research (I3A) / Univ. de Zaragoza, Spain*

P-75 Equation of state predictions of the separation of acid gases from natural gas using an ionic liquid

M.T. Mota-Martinez, Maaïke C. Kroon, Cor J. Peters
Eindhoven University of Technology, The Netherlands

P-76 Solubility of caffeine and ferulic acid in ethyl lactate + water mixtures

David Villanueva Bermejo¹, Tiziana Fornari¹ and Roumiana P. Stateva²
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²*Institute of Chemical Engineering, Bulgarian Academy of Sciences, Bulgaria*

P-77 Rheological behaviour of the ionic liquid [N_{444H}][NTf₂]

Angela Lamas and Teófilo Graber
Universidad de Antofagasta, Chile

P-78 Modeling the vapor-liquid equilibria and water activities of aqueous ionic liquids

Mariana B. Oliveira¹, Emanuel Crespo¹, Felix Llovel², Lourdes F. Vega², João A. P. Coutinho¹
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TOPIC 4. Energy. Gas and oil. Petrochemicals. Environment and sustainability

P-79 Equilibrium isotherm of isolan red biosorption onto non-living leaves of

Posidonia oceanica

*Juan F. Ortuño**, *M^a Isabel Aguilar*, *Víctor F. Meseguer*, *José Sáez*,
Mercedes Lloréns, *Ana Belén Pérez-Marín* and *Ana Lorena Picón*
Universidad de Murcia, Spain

- P-80 **Biosorption kinetic of methylene blue on brewery waste**
Víctor F. Meseguer, *Juan F. Ortuño**, *M^a Isabel Aguilar*, *Ana Belén Pérez-*
Marín, *José Sáez*, *Mercedes Lloréns*, and *Matilde Sánchez-Peña*
Universidad de Murcia, Spain
- P-81 **Using the F-SAC model to predict the behavior of ethanol-water-glycerol mixtures for the application in a extractive distillation process**
Henrique Mezzomo and *Rafael de Pelegrini Soares*
Universidade Federal do Rio Grande do Sul, Brazil
- P-82 **Analysis and implementation of different methods for characterization of heavy fractions in reservoir fluids**
Martin Cismondi¹, *Nicolas Heredia¹*, *Rafael Pereira do Carmo³*, *Papa Matar Ndiaye²*, *Frederico W. Tavares²*
¹*IDTQ-PLAPIQUI, Universidad Nacional de Córdoba, CONICET, Argentina*
²*Escola de Química – Universidade Federal do Rio de Janeiro, Brazil.*
³*Programa de Engenharia Química/COPPE – Universidade Federal do Rio de Janeiro, Brazil*
- P-83 **Dehydration of bioethanol at the pilot plant scale using naphtas as entrainers**
Jorge García-Cano, *Vicente Gomis*, *María Dolores Saquete*, *Alicia Font.*
Department of Chemical Engineering, University of Alicante, Spain
- P-84 **Dehydration of biobutanol using hexane and cyclohexane as entrainers: simulation and pilot plant scale experiment**
Jorge Garcia-Cano, *Vicente Gomis*, *Maria Dolores Saquete*, *Alicia Font*,
Rosa Diaz.
Department of Chemical Engineering, University of Alicante, Spain

TOPIC 5. Biomolecules and Biotechnology

- P-85 **Striving against α -amylase deactivation in the presence of ionic liquids**
Diana Ruivo¹, *Marita A. Cardoso³*, *Verónica Z. Bermudez³*, *Francisco J. Deive^{1,2}*, *Ana Rodríguez^{1,2}*, *Luís Paulo N. Rebelo¹*, *José M. S. S. Esperança¹*
¹*Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa, Portugal*
²*Department of Chemical Engineering, University of Vigo, Spain*
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- P-86 **On the hunt for truly biocompatible ionic liquids for lipase-catalyzed reactions**

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**P-87 Use of atomic force microscopy and light scattering for the
characterization of the structure of polymeric systems**

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**P-88 Antiproliferative activity of supercritical plant extracts on pancreatic
cancer cell line**

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TOPIC 6. Product and Process Design. Databases and Software

**P-89 Surface tension of three families of alcohols. Selection of data and
correlation**

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P-90 Fractionation of fatty esters and acylglycerols by liquid CO₂

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