



WCCE11 - 11th WORLD CONGRESS OF CHEMICAL ENGINEERING

IACCHE - XXX Inter-American Congress of Chemical Engineering
CAIQ2023 - XI Argentinian Congress of Chemical Engineering
CIBIQ2023 - II Ibero-American Congress of Chemical Engineering
Buenos Aires - Argentina - June 4-8, 2023

"The global chemical engineering working for a better future world"

GS03-Ionic liquids



GS03-Global Symposium on Ionic Liquids

Monday, June 5th
Auditorium 3
(Ground floor)

PROGRAM

ORAL SESSIONS

SESSION 1. DEEP EUTECTIC SOLVENTS

Chair: *Silvana Mattedi, Federal University of Bahia, Brazil*

Monday, June 5th
Auditorium 3

ID2480 KEYNOTE	9:00-9:30	"Experiment-Based Process Synthesis for Deep Eutectic Solvent Regeneration" <u>Schuur, B.</u> ¹ ; Gholami, M. ¹ ; Roy, Y. ^{1,2} ; Smink, D. ¹ ¹ University of Twente (The Netherlands). ² Indian Institute of Science (IISc), Center for Sustainable Technologies (India)
ID1643	9:30-9:45	"Separation of furfuryl alcohol from water using hydrophobic deep eutectic solvents" <u>Cea-Klapp, E.</u> ¹ ; Arroyo-Avirama, A.F. ² ; Ormazábal-Latorre, S. ² ; Gajardo-Parra, N.F. ³ ; Marzialetti, T. ¹ ; Held, C. ³ ; Canales, R.I. ² ; Garrido, J.M. ¹ ¹ Universidad de Concepción (Chile). ² Pontificia Universidad Católica de Chile (Chile). ³ TU Dortmund (Germany)
ID2384	9:45-10:00	"Selective Extraction of Molybdenum (VI) and Rhenium (VII) from a synthetic pregnant leach solution using hydrophobic deep eutectic solvents" Olea, F. ¹ ; Valenzuela, M. ¹ ; Zurob, E. ¹ ; Parraguez, B. ¹ ; Abejón, R. ² ; Cabezas, R. ³ ; Merlet, G. ⁴ ; Tapia, R. ⁵ ; Romero, J. ² ; <u>Quijada-Maldonado, E.</u> ¹ ¹ Laboratory of Separation Processes Intensification (SPI), ² Laboratory of Membrane Separation Processes (LabProSeM)-University of Santiago de Chile (Chile). ³ Universidad Católica de la Santísima Concepción (Chile). ⁴ Universidad de Concepción (Chile). ⁵ Pontificia Universidad Católica de Chile (Chile).
ID2399	10:00-10:15	"Glycols for separating methoxyphenols from aliphatic solvents: effect of adding choline chloride to the extractant" Ormazábal-Latorre, S. ^{1,2} ; Arroyo-Avirama, A. ¹ ; Gajardo-Parra, N. ³ ; Garrido, J.M. ⁴ ; Held, C. ³ ; <u>Canales, R.I.</u> ^{1,2} ¹ Pontificia Universidad Católica de Chile (Chile). ² Millenium Nuclei on Catalytic Processes towards Sustainable Chemistry (Chile). ³ TU Dortmund (Germany). ⁴ Universidad de Concepción (Chile)
ID2490	10:15-10:30	"The Polyphenols from Wild Chilean Murtilla Leaves obtained by Microwave Extraction using Deep Eutectic Solvents : Advanced techniques for the extraction of polyphenols with deep eutectic solvents" <u>Fuentes Jorquera, N.A.</u> ¹ ; González Miquel, M. ² ; Pérez Jimenez, J. ³ ; <u>Canales Muñoz, R.</u> ¹ ; Pérez Correa, R. ¹ ¹ Pontificia Universidad Católica de Chile (Chile). ² Polytechnic University of Madrid (Spain). ³ ICTAN-CSIC (Spain)

SESSION 2. IONIC LIQUIDS

Chair: *Boelo Schuur, University of Twente, Netherlands*

Monday, June 5th
Auditorium 3

ID1312	14:00-14:15	"Thin-film polymer/ionic liquid membrane prototype for the separation of close-boiling hydrofluorocarbon mixtures" <u>Zarca, G.</u> ; Gutiérrez, S.V.; Rodríguez, P.; Pardo, F.; Urriaga, A. Universidad de Cantabria (Spain)
ID1377	14:15-14:30	"Ionic Liquids in Soft Confinement. Creating Alternative Green Organized Systems" Correa, N.M.; <u>Falcone, R.D.</u> ; Moyano, F.; Lepori, C.; Dib, N. IDAS, (CONICET-UNRC)-Universidad Nacional de Río Cuarto (Argentina)
ID1660	14:30-14:45	"Perstraction Process for the extraction of polychlorinated biphenyls (PCB) from bovine milk using ionic liquids as receiving phase" <u>Merlet, G.</u> ¹ ; Villegas, M. ² ; Romero, J. ³ ; Cabezas, R. ⁵ ; Toledo, C. ⁴ ; Quijada-Maldonado, E. ² ¹ Universidad de Concepción (Chile). ² Laboratory of Separation Processes Intensification (SPI), ³ Laboratory of Membrane Separation Processes (LabProSeM), ⁴ Laboratorio de Electroquímica Medio Ambiental, LEQMA-Universidad de Santiago de Chile (Chile). ⁵ Universidad Católica de la Santísima Concepción (Chile)

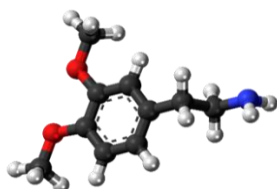
ID1805	14:45-15:00	“Enhanced Oil Recovery from carbonate rocks by means of ionic liquids” Somoza, A.; Soto, A. <i>Universidade de Santiago de Compostela (Spain)</i>
ID2489	15:00-15:15	“Development of conductive inks based on ionic liquids and graphene for screen-printed electrodes” Costa, F.B.C. ¹ ; Brandão, C.S.L. ¹ ; Silva, A.C.M. ² ; Fernandes, V.C. ³ ; Mattedi, S. ¹ ¹ Graduate Program in Chemical Engineering, ² Materials Science and Technology Department, ³ Physical Chemistry Department-Federal University of Bahia (Brazil)
ID1318	15:15-15:30	“Concentración de jugo de berries mediante destilación osmótica usando líquidos iónicos hidrofílicos como fase receptora” Cabezas, R. ¹ ; Zurob, E. ² ; Retamal, V. ² ; Merlet, G. ³ ; Romero, J. ² ¹ Universidad Católica de la Santísima Concepción (Chile). ² Laboratory of Membrane Separation Processes (LabProSeM), University of Santiago de Chile (Chile). ³ Universidad de Concepción (Chile)
ID2812	15:30-15:45	“Diseño de una membrana asimétrica basada en el líquido iónico [P6,6,6,14][Phos] gelificado para la perstracción de ácido succínico” Zurob, E. ¹ ; Cabezas, R. ² ; Quijada-Maldonado, E. ³ ; Romero, J. ² ¹ Laboratory of Membrane Separation Processes (LabProSeM), ³ Laboratory of Separation Processes Intensification (SPI)-Universidad de Santiago de Chile (Chile). ² Universidad Católica de la Santísima Concepción (Chile)

POSTER SESSION

Monday, June 5th (COFFEE AREA) 10:30-11:00 h & 16:00 -16:30 h

ID1314	“Design of ionic liquid-based extractive distillation processes for the separation of hydrofluorocarbons under non-equilibrium conditions” Viar, M.; Pardo, F.; Zarca, G.; Urriaga, A. <i>Universidad de Cantabria (Spain)</i>
ID1481	“Insights into the orientation and hydrogen bond influence on thermophysical and transport properties in choline-based deep eutectic solvents and methanol” Cea-Klapp, E. ¹ ; Garrido, J.M. ¹ ; Quinteros-Lama, H. ² ¹ Universidad de Concepción (Chile). ² Universidad de Talca (Chile)
ID1483	“Valorisation of tuna by-products: recovery of collagen using a eutectic solvent” Lucas, L.B. ¹ ; Farías, M.E. ² ; Pérez, O.E. ¹ ¹ IQUIBICEN-CONICET, Universidad de Buenos Aires (Argentina). ² Universidad Nacional de Luján (Argentina)
ID1487	“Collagen extraction from marine by-products applying ionic liquids” Souto-Montero, P.; Gallego, C.; Rodil, E.; Soto, A. <i>Universidade de Santiago de Compostela (Spain)</i>
ID1621	“Catalytic cascade processes for obtaining 5-HMF, levulinic acid and γ -valerolactone from fructose” Méndez, L.J. ¹ ; Leguizamón Aparicio, M.S. ¹ ; Musci, J.J. ² ; Barbelli, M.L. ¹ ; Cánepa, A.S. ³ ; Casella, M.L. ¹ ; Lick, I.D. ¹ ¹ CINDECA (CCT La Plata – CONICET - CIC – UNLP) (Argentina). ² CITNOBA, CONICET y Universidad Nacional del Noroeste de la Provincia de Buenos Aires (Argentina). ³ Centro de Compuestos Orgánicos-CEDECOR (UNLP) (Argentina)
ID1746	“Kinetic study of Natural Deep Eutectic Solvents by digital images. The importance of preparation time in sensing applications” Samuelsen Lucea, C. ¹ ; Lorenzetti, A.S. ¹ ; Lo Fiego, M.J. ¹ ; Vidal, E. ¹ ; Gomez, F.J.V. ² ; Silva, M.F. ² ; Domini, C.E. ¹ ¹ INQUISUR, Universidad Nacional del Sur (UNS)-CONICET (Argentina). ² IIBAM-CONICET, Universidad Nacional de Cuyo (Argentina)
ID1831	“Tailoring a new Natural Deep Eutectic Solvent to assist the extraction of metals from sediments” Nario, N.A. ¹ ; Lorenzetti, A.S. ¹ ; Samuelsen Lucea, C. ¹ ; Gomez, N.A. ¹ ; Grünhut, M. ¹ ; Cora Jofré, F. ² ; Savio, M. ² ; Azcarate, S.M. ² ; Camiña, J.M. ² ; Silva, M.F. ³ ; Gomez, F.J.V. ³ ; Domini, C.E. ¹ ¹ INQUISUR, Universidad Nacional del Sur (UNS)-CONICET (Argentina). ² CONICET-UNLPam, Universidad Nacional de La Pampa (Argentina). ³ IIBAM-CONICET, Universidad Nacional de Cuyo (Argentina)
ID2139	“Assessing the Influence of Betaine-Based Natural Deep Eutectic Systems on Enzymatic Reactions” Gajardo-Parra, N. ¹ ; Meneses, L. ² ; Cea-Klapp, E. ³ ; Garrido, J.M. ³ ; Duarte, A.R. ² ; Paiva, A. ² ; Held, C. ¹ ¹ TU Dortmund University (Germany). ² NOVA University (Portugal). ³ Universidad de Concepción (Chile)
ID2182	“Investigating the effect of [H2EA][C8OO] and [H2EA][C10OO] on the water/oil interfacial tension” Palmeira, B.A.C. ¹ ; Mattedi, S. ² ; Gonçalves, J.M.S. ³ ; Dariva, C. ³ ; Malgaresi, G.V.C. ¹ ; Guarieiro, L.L.N. ¹ ¹ Centro Universitário SENAI CIMATEC (Brazil). ² Universidade Federal da Bahia (Brazil). ³ Núcleo de Estudos em Sistemas Coloidais - ITP/UNIT (Bazil)
ID2208	“Conductivity and micellization in aqueous solutions of bis2-hydroxyethylammonium carboxylates at 298K” Farias, M.L.N. ¹ ; Silva, V.P.A. ¹ ; Costa, F.B.C. ¹ ; Fernandes, V.C. ² ; Silva, A.C.M. ³ ; Mattedi, S. ¹ ¹ Graduate Program in Chemical Engineering, ² Physical Chemistry Department, ³ Materials Science and Technology Department-Federal University of Bahia (Brazil)
ID2557	“Diseño de una membrana asimétrica basada en el líquido iónico [P6,6,6,14][Phos] gelificado para la perstracción de ácido succínico” Zurob, E. ¹ ; Cabezas, R. ² ; Quijada-Maldonado, E. ³ ; Romero, J. ² ¹ Laboratory of Membrane Separation Processes (LabProSeM), ³ Laboratory of Separation Processes Intensification (SPI)-Universidad de Santiago de Chile (Chile). ² Universidad Católica de la Santísima Concepción (Chile)
ID2639	“Surface tension of glycol-based eutectic solvents” Aravena, P. ¹ ; Cea-Klapp, E. ² ; Gajardo-Parra, N. ³ ; Held, C. ³ ; Garrido, J.M. ² ; Canales, R.I. ¹ ¹ Pontificia Universidad Católica de Chile (Chile). ² Universidad de Concepción (Chile). ³ TU Dortmund (Germany)

ID2689	<p>“Prediction of conductivity for ionic liquids through neural networks following a group contribution approach” Paixão, T.¹; Zimmermann, A.S.¹; Silva, A.C.M.²; Mattedi, S.¹ ¹Chemical Engineering Graduate Program, ²Materials Science and Technology Department-Federal University of Bahia (Brazil)</p>
ID2716	<p>“Influence of ammonium cations and temperature on thermophysical properties of ionic liquids based on hydrogen sulfate anion [HSO₄]-“ Lima, J.C.F.; Costa, F.B.C.; Barbosa, G.; Mattedi, S. Federal University of Bahia (Brazil)</p>
ID2724	<p>“Viscosity pressure and temperature influence of substituted ammonium ionic liquids based on propionate anion” Fogaça, T.^{1,2}; Reis, C.B.¹; Almeida, A.C.²; Lima, R.C.A.²; Mattedi, S.¹ ¹Federal University of Bahia (Brazil). ²LAPEG, Oil and Gas Laboratory (Brazil)</p>
ID2730	<p>“Analysis of multicomponent solubility in ionic liquids using associative and non-associative equations of state” Cardoso, L.O.¹; Paredes, M.L.L.²; Mattedi, S.¹ ¹Federal University of Bahia (Brazil). ²Rio de Janeiro State University (Brazil)</p>



Coordinators

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