SCIENTIFIC PROGRAM

Time	Tuesday, 2/10	Wednesday, 3/10	Thursday, 4/10
8:00 – 8:15	Registration		
8:15 – 8:30			
8:30 – 8:45			
8:45 – 9:00			
9:00 – 9:15		Plenary Lecture (PL3) Rajamani Krishna	Plenary Lecture (PL5) Gabriele Centi
9:15 – 9:30			
9:30 – 9:45	Welcome Session		
9:45 – 10:00			
10:00 – 10:15	Plenary Lecture (PL1) Nien-Hwa Linda Wang	O-BB07 | O-EE01 | O-IM03	O-RS11 | O-EE10 | O-BS05
10:15 – 10:30		O-BB08 | O-EE02 | O-IM04	O-RS12 | O-EE11 | O-BS06
10:30 – 10:45		O-BB09 | O-EE03 | O-IM05	O-RS13 | O-EE12 | O-BS07
10:45 – 11:00		O-BB10 | O-EE04 | O-IM06	O-RS14 | O-EE13 | O-BS08
11:00 – 11:15	Coffee-break	O-BB11 | O-EE05 | O-IM07	O-RS15 | O-EE14 | O-BS09
11:15 – 11:30		Coffee-break	Coffee-break
11:30 – 11:45	O-RS01 | O-BS01 | Bondalti		
11:45 – 12:00	O-RS02 | O-BS02 | O-MP01	O-BB12 | O-EE06 | O-ME01	Plenary Lecture (PL6) Nikolaos Hadjichristidis
12:00 – 12:15	O-RS03 | O-BS03 | O-MP02	O-BB13 | O-EE07 | O-ME02	
12:15 – 12:30	O-RS04 | O-BS04 | Prio	O-BB14 | O-EE08 | O-ME03	
12:30 – 12:45	O-RS05 | O-BB01 | O-IM01	O-BB15 | O-EE09 | O-ME04	
12:45 – 14:15	Lunch	Lunch	Lunch
14:15 – 14:30	Keynotes (KN1 and KN2) João Rocha Rosa Quinta-Ferreira	Keynotes (KN3 and KN4) Adélio Mendes José António Teixeira	Keynotes (KN5 and KN6) Maria Ascensão Reis Ramesh Gardas
14:30 – 14:45			
14:45 – 15:00			
15:00 – 15:15	O-RS06 | O-BB02 | BB&G	Plenary Lecture (PL4) María José Cocero	O-RS16 | O-EE15 | O-IM11
15:15 – 15:30	O-RS07 | O-BB03 | O-MP03		O-RS17 | O-EE16 | O-IM12
15:30 – 15:45	O-RS08 | O-BB04 | BP		O-RS18 | O-EE17 | O-IM13
15:45 – 16:00	O-RS09 | O-BB05 | O-MP04		O-MP05 | O-IM09 | O-IM14
16:00 – 16:15	O-IM02 | O-BB06 | O-RS10	Poster Session and Coffee-break P-BB, P-RS, P-MP	O-IM08 | O-IM10 | O-IM15
16:15 – 16:30	Plenary Lecture (PL2) Paul Christakopoulos		Awards and Closing Session
16:30 – 16:45			
16:45 – 17:00			Multibiorefinery Project Meeting (Coffee-break) CHEMPOR participants are welcome
17:00 – 17:15			
17:15 – 17:30	Formal Session with Minister of Economy	Bus to Vista Alegre Museum Visit	
17:30 – 17:45			
17:45 – 18:00			
18:00 – 18:15	Poster Session and Coffee-break P-BS, P-ME, P-IM, P-EE		
18:15 – 18:30			
18:30 – 18:45			
18:45 – 19:00			
19:00 – 19:15			
19:15 – 19:30			
19:30		Conference Dinner	

[PL] - Plenary Lecture
[KN] - Keynote Presentation
[RS] - Reaction and Separation Processes
[BS]- Biorefinery and Sustainability
[MP] - Modeling, Synthesis and Integration of Chemical Processes

[BB] - Biological Engineering and Biotechnology
[IM] - Innovative Materials and Applications
[EE] - Energy and Environment
[ME] - Multiscale and Multidisciplinary Engineering Education

Plenary lectures [PL]

[PL01]

Simulated moving beds: fundamental principles, enabling technologies, and applications
Nien-Hwa Linda Wang, Purdue University

[PL02]

Novel Hybrid Organosolv:Steam explosion-based integrated biorefinery of the lignocellulosic biomass (an evolution from pretreatment to fractionation processes)
Paul Christakopoulos, Luleå University of Technology

[PL03]

Exploiting entropy effects in separations with microporous crystalline adsorbent materials
Rajamani Krishna, University of Amsterdam

[PL04]

Overcoming the challenges of the sustainable biorefinery: supercritical water ultrafast processes
María José Cocero, University of Valladolid

[PL05]

Beyond fossil fuels for a transformative energy and chemistry
Gabriele Centi, University of Messina

[PL06]

The importance of model polymers in polymer science and industry
Nikolaos Hadjichristidis, King Abdullah University of Science and Technology

Keynotes presentations [KN]

[KN01]

The importance of being porous: silicates and functional MOFs
João Rocha, CICECO, University of Aveiro

[KN02]

Advanced reaction processes, wastewater treatment and reuse
Rosa M. Quinta-Ferreira, University of Coimbra

[KN03]

Harvesting and storage of solar energy: a promising new world for off the grid residences?
Adélio Mendes, University of Porto

[KN04]
Oscillatory flow reactors – a platform for process intensification
José António Teixeira, University of Minho

[KN05]
Shifting organic waste paradigm: from accumulation to valorisation into biopolymers
Maria Ascensão M. Reis, Nova University of Lisbon

[KN06]
Ionic liquids as additives for enhancing extraction, absorption and dissolution processes
Ramesh L. Gardas, Indian Institute of Technology Madras

Oral session | Biological Engineering and Biotechnology [O-BB]

[O-BB01]
Production of erythritol by Yarrowia species from crude glycerol, *P. Ferreira, A.M. Ribeiro, A.R. Machado, E. Nagy, N.D. Quang, I. Belo*

[O-BB02]
Comparing the operation of aerobic granular sludge bioreactors under different hydrodynamic regimens during the treatment of textile wastewater containing silver nanoparticles, *M. Coelho, S. Sousa, A. Rodrigues, R. Franca, C. Viegas, H. Pinheiro, N. Lourenço*

[O-BB03]
Assessing the influence of the adsorption time on the build-up of natural-origin polymeric multilayered systems: how fast can we go?, *T. Pesqueira, J. Borges, J.F. Mano*

[O-BB04]
Recovery of value-added antibodies from serum samples, *E.V. Capela, J.A.P. Coutinho, M.R.A.-Barros, A.M. Azevedo, M.G. Freire*

[O-BB05]
Aerobic granular sludge process treats real fish canning wastewater, *A.M.S. Paulo, C.L. Amorim, P.M.L. Castro*

[O-BB05]
Water2Return: towards the total recovery of nutrients from the sewage water in a slaughterhouse, *C.A. Aragon, A. Real, I. Martin, K. Fahd, J. Parrado, P. Caballero*

[O-BB07]
Yarrowia lipolytica as a potential producer of 2-phenylethanol from L-phenylalanine biotransformation, *A. Braga, A. Oliveira, B. Freitas, E. Nagy, Q. Nguyen, I. Belo*

[O-BB08]
A microfluidic platform for optimization of downstream process of biopharmaceuticals, *R.A.-Barros, A. Azevedo*

[O-BB09]
Sustainable production of plastic building blocks by enzymatic biocatalysis, *Y.M.-Diz, F. Manteiga, G. Feijoo, M.T. Moreira*

[O-BB10]
Designing humanized hydrogels toward tissue engineering and disease modeling, *C. Custódio, S. Santos, C. Monteiro, J.Mano*

[O-BB11]
Valorization of coffee wastes through acidogenic fermentation, *J. Pereira, P.C. Lemos, L.S. Serafim*

[O-BB12]
Non-ionic surfactants as a pretreatment to optimize PHA extraction from mixed microbial cultures, *B. Colombo, J. Pereira, M. Martins, S.P.M. Ventura, F. Adani, L.S. Serafim*

[O-BB13]
Design of a periodic counter-current chromatography process for efficient oncolytic virus purification, *R. Silva, J. Mendes, M. Berg, L. Mathiason, C. Peixoto, P.M. Alves, M.J.T. Carrondo,*

[O-BB14]
Novel nano-engineering phytantriol-F127-based cubosomes for antibiotic delivery, *J. Domingues, M. O. Pereira, A.M. Sousa, B. Silva*

[O-BB15]
Genotoxicity analysis of different magnetite-based nanoparticles applied in chemical catalysis processes, *M. Gamallo, S. Silva, M. Pintado, G. Feijoo, M.T. Moreira*

Oral session | Biorefinery and Sustainability [O-BS]

[O-BS01]
Production of ethanol from Pinus pinaster stump wood extracted pulp and lignin recovery, *C. Mendes, R. Moreira, A. Portugal, M.G. Carvalho*

[O-BS02]
Toward the improved sustainability of bioplastics: process modelling and life cycle assessment of an FDCA production route, *S. Bello, P.M.-Trelles, E. Rodil, G. Feijoo, M.T. Moreira*

[O-BS03]
Biorefinery approach for obtaining pigments, sugars and a protein-rich residue from microalgae, *M.F. de Souza, M.A. Rodrigues, E.P.S. Bon, S.P. Freitas*

[O-BS04]
Harvesting of carotenogenic phase Dunaliella salina by membrane filtration at lab and pilot scale, *J. Monte, J. Bernardo, M. Sá, C. Galinha, L. Costa, C. Casanovas, Ca. Brazinha, J. Crespo*

[O-BS05]
Polyols: efficient solvents to extract phenolic compounds from walnut leaves, *V. Vieira, Â. Fernandes, M.A. Prieto, R. Calhelha , L. Barros, J.A.P. Coutinho, I.C.F.R. Ferreira, O. Ferreira*

[O-BS06]
Supercritical CO_2 extraction of Eucalyptus globulus bark: Techno-economic optimization of the industrial process, *V.H. Rodrigues, M.M. R. De Melo, I. Portugal, C.M. Silva*

[O-BS07]
Aqueous solutions of surface-active agents on the recovery of violacein from Yarrowia lipolytica cells, *M. Kholany, J. Vieira, M. Martins, S. Ventura, P. Trébulle, J.-M. Nicaud, J.A.P. Coutinho*

[O-BS08]
Sustainable phenolic resin: a potential adsorbent for amoxicillin removal, *W.M. Moreira, P.V. Viotti, C.M.S.G. Baptista, M.H.N.O.Scaliante, M.L. Gimenes*

[O-BS09]
FCC Feedstocks/Bio-oils Co-processing: Towards understanding of phenolic compounds impact on Ni- and V-USY zeolites, *R. Gerards, I. Graça, F. Ribeiro*

Oral session | Reaction and Separation Processes [O-RS]

[O-RS01]
Separation of nadolol racemates by high pH reversed-phase simulated moving bed chromatography, *R.S. Arafah, A. Ribeiro, A.E. Rodrigues, L. Pais*

[O-RS02]
Separation of hexane isomers in metal organic framework ZIF-8, *A. Henrique, P. Brântuas, J. Silva, A.E. Rodrigues, M. Karimi*

[O-RS03]
Ethylene/ethane separation by gas-phase SMB in binderless Zeolite 13X monoliths, *autores*

[O-RS04]
An alternative method for the separation of C2/C3 hydrocarbons mixtures by pressure swing adsorption using the MOF MIL-100(Fe), *V. Martins, R. Seabra, P. Silva, A. Ribeiro, J.-S. Chang, J. Loureiro, A. Ferreira, A.E. Rodrigues*

[O-RS05]
Simulated Moving Bed Reactor for the production of p-xylene: isomerization, disproportionation and transalkylation reactions of xylene isomers, ethylbenzene, and toluene in liquid phase, *Q. Shi, J.C. Gonçalves, A.F.P. Ferreira, M.G. Plaza, A.E. Rodrigues*

[O-RS06]
Removal and recovery of technology-critical elements from aqueous solutions using Fe_3O_4/graphite nanoplatelets, *E. Afonso, L. Carvalho, C. Vale, E. Pereira, C.M. Silva, T. Trindade, C.B. Lopes*

[O-RS07]
CFD modelling of flow patterns, tortuosity and residence time distribution in monolithic porous columns reconstructed from X-ray tomography data, *S. Pawlowski, N. Nayak, M. Meireles, C. Portugal, S. Velizarov, J. Crespo*

[O-RS08]
Mixing of dissimilar fluids in confined impinging jets – Mayonnaise equation, *M.S.C.A. Brito, C.P. Fonte, M.M. Dias, J.C.B. Lopes, R.J. Santos*

[O-RS09]
Removal of the mixture of pharmaceuticals sulfamethoxazole and diclofenac from water streams by a polyamide nanofiltration membrane, *D. Gomes, R. Martins, R.Q.-Ferreira, L.G.-Ferreira*

[O-RS10]
Assessment of the influence of clearance and agitation on the nucleation rate and particle size distribution in anti-solvent crystallization process of a drug substance, *A. Tulcidas, B. Santos, S. Pawlowski, F. Rocha*

[O-RS11]
Glycerol steam reforming for hydrogen production: traditional versus membrane reactor, *S. Macedo, M. Soria, L. Madeira*

[O-RS12]
Monitoring the transesterification reaction by continuous off-line density measurements, *N. Prieto, A. Ferreira, A. Portugal, R. Moreira*

[O-RS13]
Multifunctional reactors for biogas upgrading through CO_2 methanation: thermodynamic considerations, *A.C. Faria, C.V. Miguel, L.M. Madeira*

[O-RS14]
Effect of TiO_2 plate supported nanotubes on the solar photocatalytic oxidation and ozonation of parabens mixtures, *J. Gomes, J. Lincho, M. Gmurek, P. Mazierski, A.Z.-Medynska, R.Q.-Ferreira, R. Martins*

[O-RS15]
Plug Flow Reactor Analysis By Minimum Entropy, *D. Rosa, P. Góes, J. Manzi*

[O-RS16]
Acidic aqueous biphasic systems: a new paradigm for the 'one-pot' extraction of critical metals, *N. Schaeffer, M. Gras, H. Passos, V. Mogilireddy, I. Billard, N. Papaiconomou, J.A.P. Coutinho*

[O-RS17]
Electrical conductive 3D printed monolith adsorbent for CO_2 capture applications, *M.J. Regufe, A. Ferreira, J.M. Loureiro, A.E. Rodrigues, A.M. Ribeiro*

[O-RS18]
Modelling studies of supercritical fluid extraction of oils from grape and chia seeds, *R. Filipe, J. Coelho, D.V.-Bermejo, T. Fornari, R. Stateva*

Oral session | Energy and Environment [O-EE]

[O-EE01]
Unbiased solar charging of an organic-inorganic redox flow battery with a tandem photoelectrode, *A. Khataee, J. Azevedo, P. Dias, E. Dražević, A. Bentien, A. Mendes*

[O-EE02]
Optimization of a passive direct methanol fuel cell with different current collector materials, *B.A. Braz, V.B. Oliveira, A.M.F.R. Pinto*

[O-EE03]
Minimizing non-ideal discharge effects in tangential multicyclone systems, *J. Rocha, J. Paiva, R. Salcedo*

[O-EE04]
Dye Sensitized Solar Cells: guidelines for highly efficient devices based on commercially available materials, *C. Hora, F. Santos, A. Pereira, J. Maçaira, G. Sales, A. Mendes*

[O-EE05]
Intensifying heterogeneous TiO_2 photocatalysis for bromate reduction: A static mixer as catalyst support, *D. Morais, F. Moreira, R. Boaventura, V. Vilar,*

[O-EE06]
Life cycle assessment of woody biomass bottom ash valorization in bituminous asphalt, *T.P. da Costa, P. Quinteiro, L. Tarelho, L. Arroja, A.C. Dias*

[O-EE07]
Comparison of radical driven technologies applied for parabens mixture degradation, *M. Gmurek, J. Gomes, R.C. Martins, R.M. Q.-Ferreira*

[O-EE08]
Bioenergy from wastewater in a microbially-charged redox flow cell, *M. Santos, L. Peixoto, C.D.-Ferreira, A. Mendes, M. Alves*

[O-EE09]
Photo-electro-Fenton process for the treatment of highly polluted effluents. Importance of the operational variables, *A.M.D. Sarabia, M. Pazos, M.A. Sanromán*

[O-EE10]
Valorization of spent coffee grounds as biosorbent for the retention of fluoxetine from water – a cost-effective alternative to activated carbon, *B. Silva, V. Rocha, A. Lago, T. Tavares*

[O-EE11]
Carbon dioxide conversion into renewable synthetic fuels, through an electrochemical process, *L. Guerra, J. Puna, J.C. Rodrigues, J. Gomes, M.T. Santos*

[O-EE12]
Intensifying heterogeneous photocatalysis for bromates reduction using the NETmix photoreactor, *S. Santos, L. Paulista, T. Silva, R. Boaventura, M. Dias, J.C. Lopes, V. Vilar*

[O-EE13]
Zeolite-based catalysts for power-to-gas application: A systematic step by step study for achieving a highly active catalyst, *M.C. Bacariza, I. Graça, J.M. Lopes, C. Henriques*

[O-EE14]
Simultaneous desulfurization and denitrogenation of fossil fuels, *F. Lima, A. Silvestre, L. Branco, I. Marrucho*

[O-EE15]
New ecofriendly cheap spacers for efficient monolithic dye sensitized solar cells, *F. Santos, D. Ivanou, J. Maçaira, A. Pereira, A. Mendes*

[O-EE16]
Beating the performance of solar charging redox flow batteries based on a hematite photoelectrode, *P. Dias, J. Azevedo, A. Mendes*

[O-EE17]
Evaluation of different pre-treatment systems for the energy recovery of greenhouse agriculture wastes in a clinker production plant., *L.M.G. Fernández, B.N. Rubia, R.G. Falcón,; F.V. Borrero*

Oral session | Innovative Materials and Applications [O-IM]

[O-IM01]
Development of bio- and eco-composites for the footwear industry, *P.C. Santos, I.P. Fernandes, J.E. Ribeiro, J.A. Pietrobelli, M.F. Barreiro*

[O-IM02]
Catalytic mineralization of formaldehyde by molybdovanadophosphate polyanions supported on cellulose-silica hybrids, *A. Granja, J. Gamelas, M. Evtyugina, I. Portugal, D. Evtyugin*

[O-IM03]
Hybrid ionic liquids/metal organic frameworks – IL@MOFs - for Gas Separation, *T. Ferreira, A. Vera, B. de Moura, R. Ribeiro, J. Mota, L. Rebelo, J. Esperança, I. Esteves*

[O-IM04]
A novel continuous production of melamine based microcapsules with a skin-hydrating active principle for textile applications using the NETmix technology, *A. Moreira, Y.A. Manrique, J.C.B. Lopes, I.M. Martins, A.E. Rodrigues, M.M. Dias*

[O-IM05]
Microencapsulation of marine chlorella by spray drying, *A. Matias, S. Oliveira, M.C. Pereira, A.A.-Bautista, N. Fernández*

[O-IM06]
Emulsion-coacervation method for the encapsulation of carotenoids, *A. Roda, P. Oliveira, V. Gonçalves, A. Matias, F. Gaspar,*

[O-IM07]
Insights into polymer-silica aerogel composites from a molecular modelling and simulation approach, *M. Oliveira, P. Santos, L. Durães, P. Simões*

[O-IM08]
Novel Alginate-Chitosan aerogel fibres for potential wound healing applications, *M.P. Batista, V. Gonçalves, F.B. Gaspar, P. Gurikov, A. Matias*

[O-IM09]
Cr(III) Removal from Aqueous Solution by Activated Carbons obtained through the Co-pyrolysis of Wastes from Rice Production, *D. Dias,; M. Bernardo, N. Lapa, F. Pinto, I. Matos, I. Fonseca*

[O-IM10]
Overcoming the mass transport limitations of amino acid-based ionic liquids in CO_2 chemical absorption by using Encapsulated Ionic Liquids, *J. Lemus, R. Santiago, C. Lemus, D. Moreno, J. Palomar* [O-IM10]

[O-IM11]
Preparation of ceramic and metallic monolithic catalysts for VOC abatement., *D. Santos, O. Soares, J. Figueiredo, O. Sanz, M. Montes, M. Pereira*

[O-IM12]
Novel hydroxyapatite-TiO_2 composite material for photocatalytic degradation of diclofenac, *I.S. Moreira, S. Murgolo, C. Piccirillo, G. Mascolo, P.M.L. Castro*

[O-IM13]
P-doped glucose-derived carbon/carbon nanotubes hybrids for oxygen reduction reaction, *R. Morais, N. Raap, M. Granja, M. Pereira, J. Figueiredo*

[O-IM14]
Hybrid Polysaccharide Membranes for Dehydration Processes, *I.T. Meireles, S. Fraga, R. Huertas, C. Brazinha, C. Torres, M. Reis, J.Crespo, I. Coelhoso*

[O-IM15]
Production of biomaterial composed by natural polymers, *V. Soeiro, L. Tundisi, P. Mazzola, E. Tambourgi, M. Chaud, A. Jozala,*

Oral session | Modeling, Synthesis and Integration of Chemical Processes [O-MP]

[O-MP01]
Influence of synthesis process on urea-formaldehyde resins, *C. Gonçalves, J. Pereira, N. Paiva, J. Ferra, J. Martins, F. Magalhães, A.B.-Timmons, L. Carvalho*

[O-MP02]
Entropic Analysis in Tubular Reactor Design, *W. Araujo, M. Silva, D. Rosa, J. Manzi*

[O-MP03]
From the traditional packed-bed reactor to the sorption-enhanced membrane reactor: a step towards H_2 production optimization through glycerol steam reforming, *J. Silva, L. Ribeiro, J. Órfão, S. Tosti, M. Soria, L.M. Madeira*

[O-MP04]
Window-based feature methods for end-of-batch quality prediction, *R. Rendall, I. Castillo, A. Schmidt, S.-T. Chin, L. Chiang, M. Reis*

[O-MP05]
Nitration process intensification, *A.L.C.L. Lopes, D.C.M. Silva, I. Portugal, C.M.S.G. Baptista*

Oral session | Multiscale and Multidisciplinary Engineering Education [O-ME]

[O-ME01]
Introduction to systems engineering and sustainability for chemical and biological engineers, *U. Tuzun*

[O-ME02]
Assessing bioethics perception among master and PhD students in chemical and environmental engineering in the University of Santiago de Compostela, *M.T. Moreira, G. Feijoo*

[O-ME03]
Virtual labs: tools to enhance students autonomy in Chemical Engineering ducation, *M.G. Rasteiro, D. Urbano, J. Granjo*

[O-ME04]
Understanding the effect of oxygen on microbial growth – teaching bioprocess engineering to biotechnology students, *A.M.R.B. Xavier, L.S. Serafim*

Poster session | Biological Engineering and Biotechnology [P-BB]

[P-BB01]
Centrifugal partition chromatography on the separation of phenolic compounds derived from lignin depolymerization, *J.H.P.M. Santos, M.R. Almeida, A.C.R.V. Dias*

[P-BB02]
Phototrophic enhanced biological phosphorus removal: a solution for reducing the aeration necessities in conventional enhanced biological phosphorus removal system, *V. Carvalho, E. Freitas, P. Silva, J. Fradinho, A. Oehmen, M. Reis*

[P-BB03]
Biodegradation of a sulfonated azo dye in anaerobic-aerobic bioreactors treating a simulated textile wastewater investigated by liquid chromatography-tandem mass spectrometry, *R.D.G. Franca, M. C. Oliveira, H.M. Pinheiro, N.D. Lourenço*

[P-BB04]
Technological aspects of beverage production using rice processing by-products: bran and broken rice, *D. Silva, A. Borges, M. Henriques, I. Rodrigues*

[P-BB05]
Bioethanol production from kraft pulp in a circular economy perspective, *R. Branco, J. Pinho, L. Serafim, A. Xavier*

[P-BB06]
Polyhydroxyalkanoates production from agricultural wastes and domestic wastewater with phototrophic purple bacteria, *J. Fradinho, B. Pereira, J. Almeida, A. Oehmen, M. Reis*

[P-BB07]
Optimization of operating conditions in accumulator reactors for improved polyhydroxyalkanoates production with phototrophic purple bacteria, *J. Fradinho, A. Oehmen, M. Reis*

[P-BB08]
Impact of textile wastewater composition on the performance and properties of an aerobic granular sludge-sequencing batch reactor system during operation after granule storage, *A. Rodrigues, R. Rosa, R. Franca, H. Pinheiro, N. Lourenço*

[P-BB09]
Effect of engineered silver nanoparticles on the performance of aerobic granular sludge regarding the potential for abatement of textile wastewater toxicity, *S. Sousa, M. Coelho, R.Franca, C. Viegas, H. Pinheiro, N. Lourenço*

[P-BB10]
From fruit pulp waste to biogas: the assessment of substrate shifts on the performance of a two-stage anaerobic digestion system, *S. Mateus, M. Carvalheira, J. Cassidy, A. Oehmen, M.A.M. Reis*

[P-BB11]
NMR kinetic and cytotoxicity studies of sesquiterpene lactones, *M. S. Silva, J. Barbosa, R. Costa, I. Gonçalves, M. Bastos*

[P-BB12]
Optimizing locked nucleic acid/2'-O-methyl-RNA fluorescence in situ hybridization (LNA/2'OMe-FISH) for bacterial detection, *A. S. Azevedo, I.M. de Sousa, R. Fernandes, N.F. Azevedo, C. Almeida*

[P-BB13]
Aqueous solutions of tensioactive ionic liquids: alternative solvents in the chlorophyll extraction from green macroalgae, *M. Martins, A.P.M. Fernandes, J.A.P. Coutinho, S.P.M. Ventura*

[P-BB14]
Understanding the ionic liquid role as adjuvants in polymer-based aqueous biphasic system, *C. Neves, R. Sousa, M. Pereira, M. Freire, J. Coutinho*

[P-BB15]
The potential of bacterial cellulose as hemostatic material, *E. Queirós, S. Pinheiro, P. Parpot, M. Gama*

[P-BB16]
Bacterial Cellulose as a stabilizer for oil-in-water emulsions, *D. Martins, A. Fontão, F. Dourado, M. Gama*

[P-BB17]
Development of a water-soluble Dextrin-Amphotericin B conjugate for the treatment of Leishmaniasis, *J. Fidalgo, R. Silva-Carvalho, S. Leal, T. Cruz, A. Tomás, P. Parpot, M. Gama*

[P-BB18]
Density and sludge volume index estimation in mature aerobic granular sludge by quantitative image analysis and chemometric tools, *C. Leal, Á.V. del Rio, A. Zlatkova, B. Araújo, D. Mesquita, A. Amaral, E. Ferreira*

[P-BB19]
Aqueous biphasic systems composed of mixtures of ionic liquids: phase diagrams and separation performance, *T. Dinis, H. Passos, M. Freire, J. Coutinho*

[P-BB20]
Dextrin: a platform for the development of Drug Delivery Systems, *A. Machado, J. Martins, J. Pereira, M. Gama*

[P-BB21]
Application of enzyme technology in the improvement of wastewater treatment systems, *C.A. Aragon, A. Real, I. Martin, K. Fahd, J. Parrado, P. Caballero*

[P-BB22]
Harvesting of Arthrospira maxima by Coagulation/ Flocculation, *N. Caetano, A. Martins, M. Gorgich, D. Gutiérrez, L. Ribeiro, T. Mata*

[P-BB23]
Toxicity of ammonium-based zwitterions to aquatic organisms, *H. Passos, F. Gonçalves, F. Jesus, J.A.P. Coutinho, S. Ventura*

[P-BB24]
Unraveling the ecotoxicity of deep eutectic solvents using the mixture toxicity theory, *F. Jesus, I.P.E. Macário, J.L. Pereira, S. Ventura, A.M.M. Gonçalves, J.A.P. Coutinho, F.J.M. Gonçalves*

[P-BB25]
The contribution of carbomer in pluronic-based thermoreversible gels of carbamazepine, *J. Ferreira, P. Pires, G. Alves, A.O. Santos*

[P-BB26]
Production of second generation bioethanol from unbleached Kraft pulp of *Eucalyptus Globulus*, *M. Amândio, R. Branco, L. Serafim*

[P-BB27]
Effect of glycerol on the anaerobic co-digestion of the organic fraction of municipal solid wastes, *A. Deodato, E. Surra, N. Lapa*

[P-BB28]
Valorise saline wastewaters through the production of polyhydroxyalkanoates (PHA) biopolymers by mixed microbial consortia (MMC), *B. Marreiros, S. Mateus, C. Oliveira, M.A. Reis*

[P-BB29]
Bio-electro-Fenton hybrid process as a pausible methodology for the degradation of ionic liquids, *M. Arellano, N. Oturan, M.Á. Sanromán, M. Pazos, M. Oturan*

[P-BB30]
Study of Kefir production, *J. Anjos, A. Lei, L. Serafim, A. Xavier*

[P-BB31]
IgG purification with alginate-protein fibril composites, *M.C. Neves, M. Sharma, A.P. Tavares, M. Freire, K. Prasad, N. Singh, D. Mondal*

[P-BB32]

Integrated biocatalytic processes by using thermoreversible aqueous biphasic systems, *A. Ferreira, H. Passos, A Okafuji, H Ohno, A.P.M. Tavares, M.G. Freire, J.A.P. Coutinho*

[P-BB33]

Activation of laccase in the presence of natural deep eutectic solvents, *M. Toledo, M. Pereira, M.G. Freire, J.P. Silva, J.A.P. Coutinho, A.P.M. Tavares*

[P-BB34]

Supported ionic liquids for the removal of cyclophosphamide from aqueous solutions, *B. Rocha, M. Neves, A.C. Sousa. T. Trindade, M. Freire*

[P-BB35]

Valorization of spent coffee grounds with supercritical fluids, *J.P. Coelho, F. Campos, M.P. Robalo, G.St. Cholakov, S. Boyadzieva, R.P. Stateva*

[P-BB36]

Behavior of lactoferrin nanohydrogels incorporating curcumin as model compound into food simulants, *J.F. Araújo, A.I. Bourbon, A.A. Vicente, P. Coutinho, O.L. Ramos*

[P-BB37]

Supported ionic liquids as efficient adsorbents for the removal of Bisphenol A, *G. Sousa, M. Neves, A. Sousa, T. Trindade, M. Freire*

[P-BB38]

Comparative evaluation of the efficiency of acid pretreatment in energy cane in relation to sugarcane bagasse, *R. Alves, Ê. Araujo, L. Campos, S. Assumpção, L. Pontes*

[P-BB39]

Extraction of laccase from Trametes versicolor growth media using aqueous biphasic systems, *M. Rosa, C. Neves, A. Xavier, A. Tavares, M. Freire*

[P-BB40]

Exploring glutathione as an adjuvant of anti-biofilm strategies against *Pseudomonas aeruginosa*, *R. Monteiro, M.O. Pereira, A.M. Sousa*

[P-BB41]

Novel glycine betaine ionic liquids analogues as components of aqueous biphasic systems with improved performance to separate amino acids, *A. Rufino, M. Rosa, M. Pereira, M. Almeida, J. Gomes, J. Coutinho, M. Freire, A. Mohamadou*

[P-BB42]

Ionic-liquid-based aqueous biphasic systems as enhanced extraction platforms for bovine serum albumin, *A. Rufino, M. Almeida, M. Sharma, J. Coutinho, M. Freire*

[P-BB43]

Removal of dyes using surfactant ionic liquids for in situ biodegradation with laccase, *R. Bento, M. Neves, J. Coutinho, M. Freire, A. Tavares*

[P-BB44]

Development of an alternative bio-based process for the extraction and purification of monoclonal antibodies, *A. Santiago, E. Capela, A.P. Tavares, M. Pereira, A. Mohamadou, J. Coutinho, M.R. Barros, A. Azevedo, M. Freire*

[P-BB45]

Dinoflagellates: unique microalgae for sustained supply of bioactive compounds, *J.L. Assunção, A.C. Guedes, F.X. Malcata*

[P-BB46]

Biological-based ionic liquids as novel preservation media for recombinant RNA, *A. Pedro, P. Pereira, M. Quental, A. Carvalho, S. Santos, J. Queiroz, F. Sousa, M. Freire*

[P-BB47]

Separation of nucleic acids using ionic-liquid functionalized macroporous supports, *P. Pereira, M. Neves, A. Pedro, I. Rodrigues, J. Martins, T. Trindade, J. Queiroz,M. Freire, F. Sousa*

[P-BB48]

Isolation and preliminary characterization of a new bacteriophage against *Sphaerotilus natans*, *R. Ferreira, R. Cardoso, J. Padrão, S. Santos, V. Ferreira, S. Cortez, J. Azeredo, M. Mota, A. Nicolau*

[P-BB49]

Bioengineered in vitro 3D hydrogel-based cancer model using chemically modified biopolymers, *V. Gaspar, M. Monteiro, J. Mano*

[P-BB50]

Dual nanomaterial systems aiming antimicrobial activity and cancer treatment, *P. Correia, C. Aguiar, A.M. Fonseca, F. Baltazar, I. Neves*

[P-BB51]

Effect of temperature and laccase activity on the production of oligorutin in a reaction medium free of organic solvents, *A.M. Mouro, B.G. Estévez, T.A. Lú-Chau, M.T.M. Vilar, J.M.L. Rodicio, G.M.E. González*

[P-BB52]

Effect of processing on the antioxidant activity of different varieties of peppers (Capsicum annuum), *M. Serra, N. Alua*

[P-BB53]

Bacterial degradation of the veterinary antibiotic florfenicol, *A.T. Couto, C.L. Amorim, P.M.L. Castro*

[P-BB54]

Changes in the biochemical composition of selected Tetraselmis species, cultured semi- continuously under distinct renewal rates, *V. Pôjo, A. Otero, F.X. Malcata*

[P-BB55]

Effect of polysaccharides in neuronal ROS production, *C. Miranda, M. Bosio, M. Batista, A. Pessoa, R.Q.Ferreira, E.Q. Ferreira, G. Marques, F. Nunes, E. Saggioro, J. Bassin, M. Dezotti*

[P-BB56]

Extraction and characterization of cell-wall polysaccharides from *Komagataella pastoris*, *I. Farinha, A. Pimentel, R. Branquinho, C. Grandfils, C. Sevrin, E. Fortunato, M.A.M. Reis, F. Freitas*

Poster session | Biorefinery and Sustainability [P-BS]

[P-BS01]

Direct transformation of cellulose to ethylene glycol using Ru-W bimetallic catalysts supported on glucose-derived carbon materials, *L.S. Ribeiro, N.R.-Raap, J.L. Figueiredo, J.J.M. Órfão, M.F.R. Pereira*

[P-BS02]

Tunable Hydrophobic Eutectic Solvents Based on Terpenes and Monocarboxylic Acids, *M. Martins, E. Crespo, P. Pontes, L. Silva, M. Bülow, G. Maximo, E. Batista, C. Held, S. Pinho, J. Coutinho*

[P-BS03]

Pre-treatment of Maize Cob Waste with Hydrogen Peroxide for Biogas Enhancement, *E. Surra, M. Bernardo, N. Lapa, I.A.A.C. Esteves, I. Fonseca, J.P. Mota*

[P-BS04]

Bacterial cellulose production through hydrolysates produced with cellulosic residues, *F. Garrett, A.E. Rodrigues, F. Dourado, M. Gama*

[P-BS05]

Assessment of agroforestry residues potential within the biorefinery context, *M. Gaspar, C. Mendes, S. Pinela, R. Moreira, M.G. Carvalho, M. Quina, M. Braga, A. Portugal*

[P-BS06]

One-pot conversion of furfural to bioproducts over mesoporous bimetallic catalysts, *M. Antunes, S. Lima, A. Fernandes, M.F. Ribeiro, D. Chadwick, K. Hellgardt, M. Pillinger, A. Valente*

[P-BS07]

Using COSMO-RS to Design Choline Chloride-Based Eutectic Solvents, *D. Abranches, M. Larriba, L. Silva, M.M.-Franco, J. Palomar, S. Pinho, J. Coutinho*

[P-BS08]

Sequential extraction of phycocyanin and chlorophyll from Anabaena cylindrica, *T. Sintra, M. Martins, I. Macário, S. Bagagem, J. Pereira, F. Gonçalves, J. Coutinho, S. Ventura*

[P-BS09]

Analyzing sugar-based NADES: A study based on experimental measurements of solid-liquid phase diagrams and their modeling using COSMO-RS, *L. Silva, L. Fernandez, J. Conceição, M. Martins, A. Sosa, J. Ortega, S. Pinho, J. Coutinho*

[P-BS10]

Experimental measurement and thermodynamic modeling of flow parameters sebum biodiesel cold, *C.Lira, Í. Araújo, A. Stragevitch*

[P-BS11]

Microwave drying and/or extraction of bioactive compounds from industrial by-products, *C.P. Passos, S.S. Ferreira, S. Cardoso, D. Wessel, G.R. Lopes, A. Rudnitskaya D.V. Evtuguin, M.A. Coimbra*

[P-BS12]
IProPBio - Integrated process and product design for sustainable biorefineries, *M. Errico, J.P. Coelho, M.P. Robalo, R.M. Filipe, M. Martin, P. Angeli, R.P. Stateva, M.P. Papadaki, C. Pastori, S. Samir, H. Matos, A.P. Petriciolet, M. El-Halwagi, M. Corraza*

[P-BS13]
Simultaneous degradation of hydrocarbons and production of valuable compounds by Yarrowia lipolytica, *M. Lopes, R. Ramôa, S. Miranda, I. Belo*

[P-BS14]
Valorisation of tomato wastes for energy production through anaerobic digestion, *S.R. Pinela, R.P. Rodrigues, M.J. Quina*

[P-BS15]
Separation of Betulinic and Oleanolic Acids by Simulated Moving Bed, *I. Azenha, J. Aniceto, S. Sequeira, C. Areia, A. Mendes, C.M. Silva*

[P-BS16]
Sustainable microalgae biorefinery development through process optimization, *A.F. da Silva, L. Costa, C. Brazinha, N. Caetano* [P-BS16]

[P-BS17]
Oxidative degradation of vanillin, vanillic acid and acetovanillone, *F. Casimiro, C. Costa, A.E. Rodrigues*

[P-BS18]
Extraction of carotenoid pigment from brown crab residues using high pressure technology, *A. Roda, A. Nunes, A. Matias*

[P-BS19]
PIV4Algae - Process Intensification for microalgal production and Valorisation, *J.P. Losa, F. Martins, M.A.-Ferraz, J. Dias, F.X. Malcata, R. Boaventura, V. Vilar, J.C. Pires*

[P-BS20]
Phosphorus Adsorption onto Biochars from Pyrolysis and co-Gasification of Agricultural Biowastes, *A. Félix, M. Bernardo,N. Lapa, F. Pinto, C.D.-Matos, I. Fonseca*

[P-BS21]
Remarkable performance of Deep Eutectic Solvents aqueous solutions on lignin solubilization and wood delignification, *B. Soares, A. Lopes P. Pinto, A. Silvestre, C. Freire, J. Coutinho*

[P-BS22]
Phase behavior of binary mixtures of saturated fames and alkanes, *N. Branco, J. Coutinho, L. Santos, J. Ribeiro*

[P-BS23]
Life cycle assessment of supercritical fluid extraction of lycopene from tomato residues, *M.M.R. De Melo, C.M. Silva, N. Caetano, T. Mata, A. Martins*

[P-BS24]
Oxidation of vanillic acid for C4 dicarboxylic acid production in the presence of TS-1 catalyst, *C. V.-Aguilar, M.F. Barreiro, A. Rodrigues* [P-BS24]

[P-BS25]
Extraction and recovery of phenolic compounds from biomass residues using aqueous solutions of ionic liquids, *E. Faria, A.F. Cláudio, J. Coutinho,A. Silvestre, M. Freire*

[P-BS26]
Oxidative polymerization of magnesium-based lignosulphonates from acidic Eucalyptus globulus sulfite pulping by laccase: preliminary results, *S. Magina, A.B.-Timmons, D.V. Evtuguin*

[P-BS27]
Valorization of Quercus cerris cork by supercritical extraction with modified carbon dioxide as green and efficient solution in relation to the classical extraction with organic solvents, *P. Vieira, M.M.R. De Melo, A. Şen, M. Simões, H. Pereira, I. Portugal, C.M. Silva*

[P-BS28]
Life-cycle inventory analysis of microalgae-based biomass production, *M. B.-Vieira, M. Freitas, T. Mata, A. Martins, N. Caetano*

[P-BS29]
Valorization of *Aurantiochytrium sp.* microalgae through supercritical fluid extraction: optimization of conditions, measurement and modeling of kinetic curves, *M.M.R. De Melo, M. Sapatinha, J. Pinheiro, M. Lemos, N.M. Bandarra, I. Batista, M.C. Paulo, J. Coutinho, J. Saraiva, C.M. Silva*

[P-BS30]
Past and future research programme on biorefinery and bioproducts at the Navigator Company, *P. Pinto, A. Gaspar, R. Rodrigues, C. Neto*

Poster session | Reaction and Separation Processes [P-RS]

[P-RS01]
Removal of antimony from water by iron-coated cork granulates, *A. Pintor, B. Vieira, R. Boaventura, C. Botelho*

[P-RS02]
Study of the effect of the compensating anion on the CO_2 sorption capacity of hydrotalcite-based sorbents, *C. Rocha, M. Soria, L. Madeira*

[P-RS03]
Separation of Nadolol Racemates by High pH Reversed-Phase Preparative Fixed-Bed Chromatography: Comparison of C18 Materials, *R.S. Arafah, A. Ribeiro, A.E. Rodrigues, L. Pais*

[P-RS04]
Solketal production from glycerol ketalization with acetone: Thermodynamic and Reaction Kinetic Study, *M. Moreira, R. Faria, A.M. Ribeiro, A.E. Rodrigues*

[P-RS05]
Spinel type – carbon based nanocomposites for the magnetically assisted removal of Hg and As species from different aqueous matrices, *R. Groot, D. Tavares, E. Pereira, T. Trindade, N. Hartog, C.B. Lopes*

[P-RS06]
Carbon dioxide ennoblement via catalytic bi-reforming of methane, *A.F. Cunha, T. Mata, N.S. Caetano, A. Martins, J.M. Loureiro*

[P-RS07]
Separation of azeotropic mixtures with aprotic solvents, *J.E. Sosa, J.M.M. Araújo, E.A.-González, A.B. Pereiro*

[P-RS08]
New extension of the Liu-Silva-Macedo model to multicomponent Lennard-Jones intradiffusivities, *B. Zêzere, I. Portugal, C.M. Silva*

[P-RS09]
Experimental and modeled diffusivities of metal acetylacetonates in liquid ethanol, and comparative insights with their diffusivity in supercritical CO_2, *B. Zêzere, I. Portugal, C.M. Silva*

[P-RS10]
A new test to measure the degree of deionization required for tartaric stabilization of wines by electrodialysis, *P. Henriques. V. Geraldes, A.M.B. Alves*

[P-RS11]
Packed Shell and Tube Heat Exchanger for the Separation and Recovery of Unreacted Monomer in Polyvinyl Chloride Plants, *P.M.O.C. do Carmo,A.M. Ribeiro, A.E. Rodrigues, A.F.P. Ferreira*

[P-RS12]
Catalytic performance of rare-earth doped HBEA zeolites over Friedel-Craft acylation reactions, *L. Borbinha, N. Nunes, A. Martins, F. Martins*

[P-RS13]
Effect of dispersant on the stabilization of calcium carbonate nanoparticles, *C. Almeida, Y. Manrique, J. Lopes, M. Dias*

[P-RS14]
Extraction and recovery of valuable metals from São Domingos acid mine drainage water, *H. Passos, B. Cruz, N. Schaeffer, C. Patinha, E.F. da Silva, J.A.P. Coutinho*

[P-RS15]
Deep-eutectic-solvents-based aqueous biphasic systems: the pH effect, *F.O. Farias, H. Passos,; J.A.P. Coutinho, M.R. Mafra*

[P-RS16]
Computational simulation of the aromatic extraction process - evaluation of thermodynamics and Sulfolan selectivity, *Í. Araújo, C. Lira, A. Stragevitch*

[P-RS17]
Studies on the solubility of syringic, vanillic and veratric acids in water and organic solvents, *S.V. Boas, R. Alves, O. Ferreira, S. Pinho*

[P-RS18]
Developing an Entropic Performance Index, *P. Góes, D. Rosa,J. Manzi,*

[P-RS19]
Activation of persulfate and peroxymonosulfate by heterogeneous catalysis for the degradation of organic pollutants, *M. Arellano, M.Á. Sanromán, M. Pazos*

[P-RS20]
Carotenoids fractionating from *Astrocaryum vulgare Mart.* (Tucumã) oil by crystallization, *M.F.S. Mota, M.J.A. Ferreira, M.F. de Souza, E.P.S. Bon, S.P. Freitas*

[P-RS21]
Development of a Molecular Model for [Ch]Cl Aiming at the Thermodynamic Modelling of Deep Eutectic Solvents, *E. Crespo, L. Silva, P. Carvalho, L. Vega, F. Llovell J.A.P. Coutinho*

[P-RS22]
Methylcycloalkane/benzene separations by extractive distillation with ionic liquids, *P. Navarro, M. Ayuso, A.M. Palma, M. Larriba, N.D.-Mellado, J. García, F. Rodríguez, J.A.P. Coutinho, P.J. Carvalho*

[P-RS23]
Cyclohexane/cyclohexene separation by extractive distillation with cyano-based ionic liquids, *P. Navarro, A. Ovejero, N.D.-Mellado, A.M. Palma, M. Larriba, J. García, F. Rodríguez, J.A.P. Coutinho, P.J. Carvalho*

[P-RS24]
Separation of cyclohexene from cyclohexane by liquid-liquid extraction with ionic liquids, *M. Ayuso, N.D.-Mellado, A.O.-Pérez, P. Navarro, M. Larriba, J. García, F. Rodríguez*

[P-RS25]
Impact of water on the CO_2 solubility in [C4C1im][Ac], *P. Navarro, P.J. Carvalho, J.A.P. Coutinho*

[P-RS26]
Simulation and optimization of the ethanol dehydration process by extractive distillation using imidazolium-based ionic liquids as solvents, *C.J. Cavalcanti,; L. Stragevitch, F. Carvalho, F. Pimentel*

[P-RS27]
Binderless Shaped Metal-Organic Framework Particles, *R. Ribeiro, C. Antunes, A. Garate, A.Portela, M. Plaza, J. Mota, I. Esteves*

[P-RS28]
Production and characterization of biodiesel obtained bt transesterification catalysed by ionic liquids based on imidazolium, *A. Bau, G. Gonçalves, A. Queiroz, A. Ribeiro, P. Brito*

[P-RS29]
Esterification process catalyzed by ionic liquids for fatty acid methyl esters production, *C. Meireles*

[P-RS30]
Biodiesel production through transesterification applying ionic liquids as catalysts, *H. Goes, L. Lima, A. Queiroz, A. Ribeiro, P. Brito*

[P-RS31]
Phosphorus recovery from aqueous solutions with an eco-friendly adsorbent, *A. Santos, A. Quina, D. Lopes, L. G.-Ferreira, M. Quina*

[P-RS32]
REEs recovery from leach solutions of fluorescent lamp wastes using supported liquid membranes, *S. Pavon, A. Fortuny, M.T. Coll, A.M. Sastre*

[P-RS33]
Sludge free solar photo-Fenton combined with biofiltration for the degradation of phenolic compounds from olive mill wastewaters, *E. Domingues, J. Gomes, M. Gmurek, M. Quina, R. Martins, R.Q.-Ferreira*

[P-RS34]
Ionic liquids as solvent for the extraction of phenols from effluents of biomass fast pyrolisis, *E.J. González, I. Díaz, M. Rodríguez, M.G.-Miquel, M.H.-Caricol*

[P-RS35]
Heterogeneous solar photo-Fenton using red-mud as low cost catalyst for olive mill wastewater treatment, *E. Domingues, D. Lopes, J. Frade, M. Gmurek,; Ma. Quina, R. Martins, R.Q.-Ferreira*

[P-RS36]
Lagrangian Mixing Simulation and Quantification of Scales, *J. Matos,; M. Brito, M. Dias, J.C. Lopes, R. Santos*

[P-RS37]
Modeling of Carbonation and Calcination Reactions of Ca-Looping Process for CO_2 post-combustion capture in gPROMS®, *M. Torres, R.M. Filipe, C. Pinheiro, H. Matos*

[P-RS38]
Modulating behavior of Ionic Liquid on Micellization behavior in Aqueous Surfactant, *I. Khan, M.A. Usmani, J.A.P. Coutinho*

[P-RS39]
Rigorous Modelling of the NO_x Absorption Process: Steady state sensitivity and validation of the dynamic behavior, *I. Vilarinho, N. Oliveira, B. Duarte, S. Pereira*

[P-RS40]
Sequential extraction of phenolic compounds from Libidibia ferrea fruits using pressurized fluids, *J.R.S. Botelho, R.N. de Carvalho Júnior, H.C. de Sousa, M.E.M. Braga*

[P-RS41]
Solketal, a fuel additive produced from the valorization of glycerol, *J. Martinho, J. Puna, M.T. Santos*

[P-RS42]
Reactive LIF test reaction for micromixing studies: definition of suitable operational conditions and validation in a T-jets mixer, *J.P. Ribeiro, M. Brito, L. Esteves, R. Santos, M.I. Nunes*

[P-RS43]
CO_2 and CH_4 adsorption on MIL-160(Al) from dry and wet streams, *M. Silva, A. Ribeiro, C. Silva, U-H. Lee, J. Faria, J. Loureiro, J.-S. Chang, A.E. Rodrigues, A. Ferreira*

[P-RS44]
Study of tritperpenic acids isolation by simulated moving bed at two distinct scales, *J. Aniceto, I. Azenha, A. Mendes, C.M. Silva*

[P-RS45]
Molecularly Imprinted Polymers for the chromatographic separation of triterpenic acids isomers, *J. Aniceto, A. Rudnitskaya, C.M. Silva*

[P-RS46]
Development of integrated processes applying reversible aqueous biphasic systems, *A. Conceição, H. Passos, J.A.P. Coutinho, M. Freire*

[P-RS47]
Production of clean synthetic fuels using nanocrystalline MFI-based micro/mesoporous zeotypes synthesised via bottom-up approaches, *A. Silva, M. Antunes, C.M. Silva, A. Valente, A. Fernandes, M. Ribeiro*

[P-RS48]
Micro/mesostructured catalysts based on the BEA topology for 1-butene oligomerisation, *A. Valente, A. Silva, P. Neves, M. Antunes, A. Fernandes, M. Ribeiro, C.M. Silva, S. Rocha*

[P-RS49]
Measurement of diffusion coefficients of lycopene and astaxanthin in compressed liquids, *J. Silva, B. Zêzere, I. Portugal, C.M. Silva*

[P-RS50]
Model of a Formaldehyde Absorption System, *C. Braz, A. Mendes, J. Rocha, R. Alvim, H. Matos* [P-RS50]

[P-RS51]
Synthesis and characterisation of aluminosilicate ZSM-5 membranes, *S. Costa, S.P. Cardoso, Z. Lin, C.M. Silva*

[P-RS52]
Ionic Liquids and Carbohydrates in aqueous media: novel sustainable separation platforms, *S. Pedro, M.J. Quental, M. Pereira, A. Ferreira, S. Shahriari, A. Mohamadou, J.A.P. Coutinho, M. Freire*

[P-RS53]
UVC coupled tube-in-tube membrane microreactor using on-demand H_2O_2 injection for oxytetracycline degradation, *P.A.-Muniozguren, J.P. Monteiro, J. Lee, S.M. Miranda, R.A.R. Boaventura, V.J.P. Vilar*

[P-RS54]
Acoustic cavitation combined ozonation for real abattoir wastewater treatment, *P.A.- Muniozguren, M.H. Bohari, C.A.-Rossa, A. Sicilia, M. Bussemaker, D. Saroj, J. Lee*

Poster session | Energy and Environment [P-EE]

[P-EE01]
Multi-electrode window for large-area solar hydrogen production, *A. Vilanova, T. Lopes, A. Mendes*

[P-EE02]
Investigation of the viability of converting a leachate from a mechanical biological treatment plant for municipal solid waste into fertilizers., *J. Cardoso, B. Rodrigues, P. Brito, H. Gomes*

[P-EE03]
Hydrophobic monoterpenes: myth or reality?, *M.A.R. Martins, L.P. Silva,; J.A.P. Coutinho, S.P. Pinho*

[P-EE04]
Optimization of soybean oil ethanolysis by response surface methodology, *M.S. Ramos, M, Catarino, A.P.S. Dias, J. Puna*

[P-EE05]
Preliminary analysis of ashes from different agricultural and forestry biomass residues, *D. Marques, D. Direito, M. Reinhardt, R.M. Pilão, A.M. Ribeiro*

[P-EE06]
Thermochemical behaviour of wet blue shavings in an inert atmosphere., *D. Direito, A.F. Almeida, R.M. Pilão, A.M. Ribeiro*

[P-EE07]
Influence of the synthesis conditions on the selectivity of CuZn catalysts towards CO_2 electrochemical reduction (ERCO2), *C. Azenha, C.M.-Pedrero, A. Mendes*

[P-EE08]
Development of a simple and inexpensive methodology for the determination of estrone and 17α-ethinylestradiol in sludge samples, *V. Louros, D. Lima, J. Leitão, V.Esteves, H. Nadais*

[P-EE09]
Removal of estrone and 17α- ethinylestradiol by digested sludge under different conditions using batch experiments, *V. Louros, A. Sousa, D. Lima, J. Leitão, V. Esteves, H. Nadais*

[P-EE10]
Solid-liquid extraction for the determination of volatile methylsiloxanes (VMSs) in sewage sludge samples, *J. Silva, F. Bernardo, N. Ratola, A. Alves, V. Homem*

[P-EE11]
Electrochemical degradation of Diclofenac on catalysts based on CNT and M/CNT modified electrodes, *M.A. Ferreira, S. Güney,; I.K.-Biernacka, S. Soares, M.F. Pereira, J.L. Figueiredo, I. Neves, A.M. Fonseca, P. Parpot*

[P-EE12]
Fe(III)NaYnano as efficient electrocatalyst for electrodegradation of Congo Red dye, *M.A. Ferreira, Z. Bencheqroun, H. Zaitan, M. Nawdali, A.M. Fonseca, P. Parpot, I. Neves*

[P-EE13]
Hermetic encapsulation of hole transport-free perovskite solar cell, *S. Emami, D. Ivanou, A. Mendes*

[P-EE14]
Electrochemical characterization of commercial activated carbons, *N. Nunes, R.E.-Leitão, A. Martins*

[P-EE15]
Preparation of carbon-based electrodes to be used as back-contact in perovskite solar cells, *A.C. Teixeira, L. Andrade, A. Mendes*

[P-EE16]
Thermally and chemically activated biochar obtained in mechanical biological treatment plants for carbon dioxide adsorption, *M. Karimi, Carmem N.D.P. Gonçalve, J.A.C. Silva, A.E. Rodrigues, P. Brântuas*

[P-EE17]
Metal-free carbon nanotubes as catalysts for wet air oxidation of oxalic acid: the role of S, B and P heteroatoms, *R.P. Rocha, O.S.G.P. Soares, J.J.M. Órfão, M.F.R. Pereira, J.J. Figueiredo*

[P-EE18]
Synthesis of high surface area host-guest hematite photoelectrodes for photoelectrochemical cells, *F. Francisco*

[P-EE19]
Increasing cyclone performance with an optimized post-cyclone recirculator: ReCyclone® MHV, *J. Rocha, J. Paiva, R. Salcedo*

[P-EE20]
Catalytic hydrolysis of NaBH4 for Hydrogen synthesis: Study of the by-product of reaction, *D.L. Silva, H.X. Nunes, C. Rangel, A. Pinto*

[P-EE21]
Monitoring of emerging micropollutants in hydric media in Bragança district, *A. Nemoto, M. Golçalves, A. Queiroz, A. Ribeiro, P. Brito*

[P-EE22]
Numerical Simulation of the Membrane Chemical Degradation in a PEM fuel cell, *R. Ferreira, D. Falcão, A. Pinto*

[P-EE23]
Treatment and energy valorization of residual glycerol in a perfectly mixed batch reactor, *L. Paulista, R. Boaventura, V. Vilar, A. Pinheiro, R. Martins*

[P-EE24]
Boosting the efficiency of large area dye sensitized solar cells, *D. Ivanou, J. Capitão, J. Maçaira, A.I. Pereira, A. Mendes*

[P-EE25]
Inhibition effect of heavy metals in microalgal growth and nutrient uptake in wastewaters: an experimental and mathematical approach, *F. Santos, L. Mazur, D. Mayer, V. Vilar, J. Pires*

[P-EE26]
Impact of environmental conditions in perovskite solar cells: temperature, oxygen and moisture, *I. Mesquita, L. Andrade, A. Mendes*

[P-EE27]
Degradation of benzodiazepines and carbamazepine by electrochemical oxidation using boron doped diamond electrode and effects on neuronal toxicity, *B. Souza, M. Bosio,; M. Dezotti, J. Bassin, E.Q.-Ferreira, R.Q.-Ferreira, E. Saggioro*

[P-EE28]
Drying sewage sludge with coal fly ash for producing a soil amendment, *L.A. Gomes, R.J.A. Lopes, J.C.M. Góis, M.M.J. Quina*

[P-EE29]
Biodiesel production using nanocatalyst from calcium waste materials, *S. Santos, L. Nobre, J. Puna, J. Gomes, R.Q.-Ferreira, J. Bordado*

[P-EE30]
Preliminary tests on the use of additives to decrease fine particles emission in biomass combustion, *J. Condeço, S. Hariharakrishnan, N. Canha, S. Pereira, M. Costa, J. Bordado, J. Correia*

[P-EE31]
Co-combustion of residual forest biomass derived from eucalyptus with sludge from wastewater treatment in the pulp and paper industry: NO and chlorine emissions, *D. Pio, L. Tarelho, T. Nunes, M. Matos*

[P-EE32]
Optimization of Fenton/photo-Fenton processes for AOX removal from real pulp and paper bleaching wastewater, *M.I. Nunes, J. Ribeiro, C. Marques, I. Portugal*

[P-EE33]
Photocatalytic reduction of bromate in fresh waters using a static mixer as photocatalyst support, *D. Morais, F. Moreira, R. Boaventura, V. Vilar*

[P-EE34]
The effect of Ni-Ru supported catalyst in the sodium borohydride catalytic hydrolysis for hydrogen generation., *H.X. Nunes,; C. Rangel, A. Pinto*

[P-EE35]
Assignment of hazardous characteristics to wastes: HP14 ecotoxicity, *B. Bandarra, L. Gomes, J. Pereira, F. Gonçalves, R. Martins, M. Quina*

[P-EE36]
Thermochemical characterization of tars Produced in the context of biomass gasification, *D. Santos*

[P-EE37]
Performance of a passive and semi-passive Direct Alcohol Fuel Cell, *C.S. Moreira, V.B. Oliveira, A.M.F.R. Pinto*

[P-EE38]
Gasohol direct production for energy-efficient bioethanol downstream processing, *Â.D. Nunes, J. Granjo, B.P. Duarte, N.M. Oliveira*

[P-EE39]
Improved sorbents for Calcium looping CO_2 capture in the cement industry: increasing sintering resistance using waste resources and steam, *P. Teixeira, I. Mohamed, C.I.C. Pinheiro, A. Fernandes, M.F. Ribeiro*

[P-EE40]
On the efficacy of single and catalytic ozonation using volcanic rock in mitigating the ecotoxicity of a parabens mixture, *J. Gomes, D. Frasson, J. Pereira, F. Gonçalves, L. Castro, R.Q.-Ferreira, R. Martins*

[P-EE41]
Bromates removal by heterogeneous photocatalysis in a drinking Water treatment plant, *S. Santos, L. Paulista, T. Silva, R. Boaventura, M. Dias, J.C. Lopes, V. Vilar*

[P-EE42]
Comparative studies between homogeneous and heterogeneous Fenton's process – low-cost materials experimentation and alternatives to the classic process, *A. Rossi, R. Martins, R.Q.-Ferreira*

[P-EE43]
Life cycle assessment of a vanadium flow batter, *J. Gouveia, A. Monteiro, A. Mendes, T. Mata, N. Caetano, A. Martins*

[P-EE44]
Nitrogen and COD removal enhancement in a SBR: influence of using step-feed and indirect parameters monitorization, in a real-time control perspective, *I. Inocêncio*

[P-EE45]
Kinetic modelling of the pyrolysis and combustion of woody biomass, *M. Martins, D. Pokwiczał, F. Lemos, H. Pereira, J. Zuwała, T. Iluk, M.A. Lemos*

[P-EE46]
Energy optimization of sludge anaerobic digestion, *M.T. Santos, F. Alves*

[P-EE47]
Study of Hg^{2+} removal from tap water using different biosorbents, *E. Fabre, C. Vale, E. Pereira, C.M. Silva*

[P-EE48]
Design of experiments and response surface methodology as powerful tools for optimization of adsorption heat pumps, *J. Pinheiro, S. Salústio, A. Valente, C.M. Silva*

[P-EE49]
Copper foam coated with CPO-27(Ni) metal-organic framework for adsorption heat pump: simulation study using OpenFOAM, *J. Pinheiro, S. Salústio, V. Geraldes, A. Valente, C.M. Silva*

[P-EE50]
Influence of distinct cations in solution on the equilibrium and kinetics of mercury removal using titanosilicate ETS-4, *S.P. Cardoso, T. Faria, C.B. Lopes, E. Pereira, I. Portugal, C.M. Silva*

Poster session | Innovative Materials and Applications [P-IM]

[P-IM01]
Green and sustainable strategy to produce plastic antibodies for highly-specific pharma separation processes, *R. Viveiros, T. Casimiro*

[P-IM02]
Design of RAFT synthesized amphiphilic and stimuli-responsive block copolymers for encapsulation of polyphenols in polymersomes, *C. Gomes, R. Dias, M.R. Costa*

[P-IM03]
Adsorbent based on ZIF-8 for chiral separation in liquid chromatography, *C. Santana, T. Menezes, S. Egues, J. de Conto*

[P-IM04]
Sequential photocatalysis-electro-Fenton process mediated with magnetic Fe-TiO_2 beads for the treatment of polluted effluents, *A.M.D. Sarabia, M. Pazos, M.Á. Sanromán, S. Rezgui, L. Monser, N. Adhoum*

[P-IM05]
Calix[4]arene-Carbazole-containing polymers synthesis, properties and thin films as molecular sensors, *A.I. Costa,P.D. Barata, C.B. Fialho, J.V. Prata*

[P-IM06]
New bicyclic fluorescent Calix[4]arene-Polymers for molecular sensing in fluid phase, *P.D. Barata, A.I. Costa, C.B. Fialho, J.V. Prata*

[P-IM07]
Functional bio-based polyurethane foams from industrial residues, *N. Gama, A. Ferreira, A. Barros*

[P-IM08]
Incorporation of IL@ZIF-8 composites into Matrimid® 5218 to produce Mixed-Matrix Membranes for Gas Separation, *T. Ferreira, B. de Moura, L. Neves, J. Esperança, I. Esteves*

[P-IM09]
Chemical-physical study of ibuprofen incorporated into unmodified and modified mesoporous silicas: from matrix synthesis to drug release, *S. Inocêncio, I. Matos, F. Danède, A. Santos, J. Sotomayor, I. Fonseca, N. Correia, M. Dionísio, M. Corvo, T. Cordeiro*

[P-IM10]
Crosslinked starch/chitosan microparticles as reinforcement of thermoplastic corn starch, *D. Paiva, J. Martins,L. Carvalho, F.D. Magalhães*

[P-IM11]
Thermal properties and molecular interactions of alginate/gelatin hydrogel microparticles, *N. Pilipenko, G.D. Sorita, J. Pinto, I.P. Fernandes, O.H. Gonçalves, F.V. Leimann, M.F. Barreiro*

[P-IM12]
Novel O/W green emulsions stabilized with nano-hydroxyapatite solid particles – Pickering emulsions, *A. Ribeiro, Y. Manrique, I.F.R. Ferreira, M.F. Barreiro, J.C.B Lopes, M.M. Dias*

[P-IM13]
Sorption of fluorinated greenhouse gases using fluorinated ionic liquids, *J.E. Sosa, R.P.P.L. Ribeiro, J.P.B. Mota, J.M.M. Araújo, A.B. Pereiro*

[P-IM14]
New eco-sorbents for hydrogen sulphide removal from biogas, *J.E. Sosa, R.P.P.L. Ribeiro, J.P.B. Mota, J.M.M. Araújo, A.B. Pereiro*

[P-IM15]
Influence of the treatment of mesoporous silica surfaces in the release profile of a loaded drug, *R. Domingos, T. Cordeiro, I. Matos, J. Sotomayor, I.M. Fonseca,; M.M. Cardoso, M. Dionisio, M.T. Viciosa*

[P-IM16]
Silica aerogel reinforcement with different types of cellulose fibres, *A. Portugal, A. Romeiro, L. Durães*

[P-IM17]
Selective recovery of platinum-group elements using Fe3O4@EG nanocomposites and their precursors, *F. Rocha, E. Pereira, T. Trindade, C.M. Silva, C.B. Lopes*

[P-IM18]
A New Molybdenum Trioxide Hybrid Decorated by 3-(1,2,4-Triazol-4-yl)adamantane-1- carboxylic acid: a Promising Reaction-Induced Self-Separating Catalyst for Epoxidation, *P. Neves, A. Lysenko, G. Senchyk, K. Domasevitch, H. Krautscheid, A. Valente, I. Gonçalves*

[P-IM19]
Ultralight microcellular polyurethanes for the production of technical footwear components, *H. Rafael, I.P. Fernandes, H.T. Gomes, V. Pinto, A. Fernandes, M.J. Ferreira. M.F. Barreiro*

[P-IM20]
Stabilizing Simvastatin in the Amorphous State into Nanostructured Matrices, *A. Franco, T. Cordeiro, I. Matos, C.V. Pereira, J.C. Sotomayor, I.M. Fonseca, M.M. Cardoso, A. Matias, M. Dionisio, M.T. Viciosa*

[P-IM21]
Use of ABES to evaluate the impact of chitosan solution on the cure of starch based resins, *M.L. Almeida, J. M. Martins, C. Coelho, F.M. Magalhães, L.H. Carvalho*

[P-IM22]
BioFPro a web based software for correlation and prediction of biofuels properties, *A. Ferreira, N. Prieto, J. Granjo*

[P-IM23]
Modified carbon nanotubes as alternative platforms for the adsorption of immunoglobulin G, *D. Castro, M. Neves, J.A.P. Coutinho, J. Faria, M. Freire, C. Silva, A. Tavares,*

[P-IM24]
Neon Adsorption on Metal-Organic Frameworks over wide Temperature and Pressure Ranges, *J. Barreto, M. Xavier,R. Ribeiro, D. Martins, I. Esteves, M. Branco, G. Bonfait, J. Mota*

[P-IM25]
Titanium oxide-based materials for photo-catalysis of dyes and benzene, *M. Silva, M. Lourenço, D. Tobaldi, P. Seabra, P. Ferreira*

[P-IM26]
Enantioselective separation of racemic mandelic acid using aqueous biphasic systems with chiral ionic liquids, *M. Kholany, F. Silva, T. Sintra, S. Ventura, J.A.P. Coutinho*

[P-IM27]
Hydrogen Peroxide Oxidation of Potato Starch, *J.V. Barbosa, J. Martins, L.H. Carvalho, F.D. Magalhães, M.M.S.M Bastos*

[P-IM28]
Development of acrylic/alkyd hybrid polymers, *S. Loureiro, J.V. Barbosa, J. Moniz, F.D. Magalhães, M.M.S.M. Bastos*

[P-IM29]
Predicting paint composition from middle infrared spectra (FTIR), *M.J. Fernandes, F. Oliveira, J. Peres, F. Martins, M.M.S.M Bastos*

[P-IM30]

Covalent Organic Frameworks as support for Ni nanocatalysts for CO_2 methanation, *L. Gonçalves, J. Sousa, S. Soares, Y. Kolenko, F. Pereira*

[P-IM31]

Development of new lead-free medical X-ray protective clothing, *P. Ramalho, S. Soares, T. Pinto, A. Gonçalves, A. Barros, G. Santos, J. Morgado, C. Freire, C. Pereira, F. Pereira*

[P-IM32]

Nanomaterials application in water disinfection for human consumption, *A.S.G.G. Santos, P.S.F. Ramalho, A.R. Lopes, A.G. Gonçalves, O.P. Nunes, M.F.R. Pereira, O.S.G.P. Soares*

[P-IM33]

Valorization of wastes from pulp and paper industry: effect of distinct formulations and stabilization conditions in the properties of granules to be used as soil improvers, *N. Cruz, F. Silva, L. Tarelho, S. Rodrigues*

[P-IM34]

Recovery of rare earths from natural waters using carbon-based nanomaterials, *C. Cardoso, E. Pereira,*

[P-IM35]

Microencapsulation by spray coagulation method: study of the alginate crosslinking by different calcium salts, *D. Cuma, I.P. Fernandes, M.F. Barreiro*

[P-IM36]

Emulsions preparation based on ternary phase diagrams: comparative study using two oils (Miglyol and Sweet Almond) with two distinct surfactants (Tween 80 and Saponin), *T. Schreiner, M. Dias, S. Pinho, M.F. Barreiro*

[P-IM37]

The effect of treating the carbon supports on the copper electrocatalytic activity towards the electroreduction of CO_2, *N. Pereira, C.M.-Pedrero, A. Mendes*

[P-IM38]

From Kinetics to Equilibrium Control in CO_2 capture columns using Encapsulated Ionic Liquids (ENILs), *C. Moya, R. Santiago, J. Lemus, D. Moreno, J. Palomar*

[P-IM39]

New promising microporous niobium and vanadium silicates for mercury removal from aqueous solutions, *E. Fabre, A. Rocha, C.B. Lopes, C. Vale, C.M. Silva, E. Pereira*

Poster session | Modeling, Synthesis and Integration of Chemical Processes [P-MP]

[P-MP01]
^{1}H NMR spectroscopy combined with partial least squares regression for predicting gasoline composition, *A.L. Leal, J.C. Ribeiro, A.M.S. Silva, F.G. Martins*

[P-MP02]
Modeling clathrate hydrate formation/inhibition using a modified CPA EoS, *A. Palma, A. Queimada, J.A.P. Coutinho* [P-MP02]

[P-MP03]
Heat exchanger network retrofit of an aromatics plant process unit using a hybrid methodology, *V.E. Araújo, F.P. Bernardo, C.M. Reis, F.G. Martins*

[P-MP04]
Advanced multi-granularity analytics for industry 4.0, *M.S. dos Reis, T. Rato*

[P-MP05]
Structured multiblock approaches for high-dimensional predictive modeling, *M.S. dos Reis*

[P-MP06]
Gas hydrates as a potential solution as carbon capture and storage technology, *M.F. Costa, C.M. Teixeira, R.J. Santos, M.M. Dias, J.C.B. Lopes*

[P-MP07]
Polymeric catalytic membranes for biodiesel production – Effect of the addition of k- carrageenan in PVA membranes, *R. Risso, M. Ventura, C. Duarte, I. Fonseca, J. Vital*

[P-MP08]
(Nitro)Phenols reactivity in mixed acid benzene nitration, *D. Afonso, A. Ribeiro, P. Araújo, J. Vital, L.M. Madeira*

[P-MP09]
Simulation, monitoring and diagnosis of faults and equipment degradation in chemical processes, *J. Sansana, M. Reis*

[P-MP10]
Image-based process monitoring using multiscale and multivariate image analysis: A pilot scale implementation study and results, *E. Strelet, M. Reis*

[P-MP11]
A coarse-grain computer simulation approach of triblock copolymers, *G. Pe.-Sanchez, F.A. Vicente, N. Schaeffer, S.P.M. Ventura, J.A.P. Coutinho*

[P-MP12]
Galp's Sines Refinery Hydrogen Network Optimisation, *J.P. Marques, H. Matos, N. Oliveira, C. Nunes, A. Guerreiro, M. Prego*

[P-MP13]
Synthesis and characterization of Reactive Polyurethane hotmelt adhesives, *J.M. Martins, I.C. Cardoso, C. Esteves, M. Bastos, J. Fernandes, N. Pinho, M.F. Barreiro, F.D. Magalhães, L.H. Carvalho*

Poster session | Multiscale and Multidisciplinary Engineering Education [P-ME]

[P-ME01]

A simple laboratory approach for the determination and characterization of ternary phase diagrams for Chemical Engineering undergraduate students, *E.V. Capela, J.H.P.M. Santos, I.B.-Palheiros, J.A.P. Coutinho, S.P.M. Ventura, M.G. Freire*

[P-ME02]

Promoting an active learning in subjects of the Chemical Engineering degree, *E.J. González, I. Díaz, M. Rodríguez, M.G.-Miquel*

[P-ME03]

Exploring the non-ideal behavior of coiled and straight tubular reactors., *N.V. Gama, F.A. da Silva, I. Portugal*

[P-ME04]

Pushing the dynamics and the outputs of laboratory courses, *A. B.-Timmons, F.A. da Silva*

[P-ME05]

Contribution to Innovation in Chemical Engineering Education Using Online Resources, *A. Cardoso, M.G. Rasteiro*

[P-ME06]

Developing a framework for assessing the teaching effectiveness in Chemical Engineering education, *C. Miguel, C. Moreira, M. Alves, J. Campos, J. Glassey, E. Schaer, N. Kockmann, A. Porjazoska, M. Polakovic, L.M. Madeira1*