



WCCE11 - 11th WORLD CONGRESS OF CHEMICAL ENGINEERING

IACCHE - XXX INTERAMERICAN CONGRESS OF CHEMICAL ENGINEERING
CAIQ2023 - XI ARGENTINIAN CONGRESS OF CHEMICAL ENGINEERING
CIBIQ2023 - II IBEROAMERICAN CONGRESS OF CHEMICAL ENGINEERING
Buenos Aires - Argentina - June 4-8, 2023

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

Preliminary Program Area 8 PROCESS INDUSTRIES – NEW INNOVATIVE PROCESSES, PROCESS INTENSIFICATION

Monday 5 June, Room 13

Session #1 ORAL & FLASH ORAL PRESENTATIONS

9:00-9:15	1421	A Optimization framework based on a sensitivity analysis for the identification of the critical design variables	Villareal de Aquino
9:15-9:30	1729	Intensification of protease production and evaluation of transport phenomena on the performance of a solid-state fermentation bioreactor and different designs of packed bed bioreactors	Rivera Rivero
9:30-9:45	2924	Economic evaluation of a pilot-scale gas phase process to produce carboxylated cellulose nanocrystals	S. Forssell
9:45-10:00	1452	Purification of 1-butene through selective hydrogenation in a flow-through catalytic membrane reactor	G. Garcia Colli
10:00-10:05	1337	Microreactor revolution in the dehydration and oxidation of alcohols to sustainable products.	L. Mastroianni
10:05-10:10	2805	Evaluation of litiiferous brines in an evaporite process by using simulation in Aspen Plus	J.R. Lezama
10:10-10:15	1373	Ultrasound as a process intensification tool in fatty acid epoxidation	T. Salmi
10:15-10:30		Questions about Presentations	

10:30-11:30

Coffee Break and Posters Discussion

11:30-12:30

Section Plenary Conference Dr. Soledad Peresin

Nanocellulose materials and their market potential: enabling sustainable products platforms using biomass

12:30-14:00

Lunch Interval

Session #2 ORAL & FLASH ORAL PRESENTATIONS

14:00-14:15	1562	Intensification of non-edible vegetable oil epoxidation by continuous operation	T. Cogliano
14:15-14:30	2112	Direct synthesis of acrylonitrile from green hydrogen and CO ₂	I. Cornejo
14:30-14:45	2375	E-STIM: A new technology for improve oil recovery by destabilizing W/O interfaces	A. Saavedra
14:45-15:00	2385	CATHODIC SQUEZZE: A new technology for protection of underground metal structures	A. Saavedra
15:00-15:15	2282	Redox dehydrogenation of propane utilizing lattice S ²⁻ in metal sulfide catalyst	R. Watanabe
15:15-15:30	2378	Scale-Up of Photochemical Processes using the Rotor-Stator Spinning Disc Reactor	A. Chauduri
15:30-15:35	2289	Investigation of the influence of the liquid properties on the dynamic of wet	P. Grohn

		particles in a rotor granulator with CFD-DEM simulations	
15:35-15:40	2741	Sustainable Water Network for Steel Plant Incorporating Maintenance Aspect	A. Bharucha
15:40-15:45	1804	Integrated carbon capture and utilization based on bifunctional ionic liquids	J. Palomar
15:45-16:00		Questions about Presentations	

16:00-16:30	Coffee Break and Posters Discussion		
-------------	--	--	--

Session #3 ORAL & FLASH ORAL PRESENTATIONS

16:30-16:45	2885	Modeling of an intensified reactor for hydroformylation of 1- butene with simultaneous catalytic gas phase reaction and membrane separation	I.W. Panjikkaran
16:45-17:00	1501	Freshwater recovery through electroactive biocarbon membrane contactors	E. Araoz
17:00-17:05	2767	Computer-aided process engineering applied to PVC production: current challenges and future practices	A.D. González Delgado
17:05-17:20		Questions about Presentations	

17:30-18:30	Plenary Conference		
-------------	---------------------------	--	--

18:30-19:30	Posters Discussion		
-------------	--------------------	--	--



**WCCE11 - 11th WORLD CONGRESS OF
CHEMICAL ENGINEERING**

IACCHE - XXX INTERAMERICAN CONGRESS OF CHEMICAL ENGINEERING
CAIQ2023 - XI ARGENTINIAN CONGRESS OF CHEMICAL ENGINEERING
CIBIQ2023 - II IBEROAMERICAN CONGRESS OF CHEMICAL ENGINEERING

Buenos Aires - Argentina - June 4-8, 2023

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

**Preliminary Program Area 8 PROCESS INDUSTRIES – NEW INNOVATIVE PROCESSES,
PROCESS INTENSIFICATION**

POSTER SESSIONS

Monday 5 June

2448	Fenton process intensification through scale-down using supported magnetic nanoparticles	D.A. Figueroa Paredes
1228	Green solvents production at a pilot reactive distillation column: PSE tools implementation	C.A. García Echeverry
1322	Eco-friendly and sustainable technology for the recovery of microbial-based astaxanthin to produce smart bioactive plastics	C. Mussagy
1428	Simultaneous Globally Optimal Heat Exchanger Network and Heat Exchanger Synthesis	M. Bagajewicz
1632	Application of machine learning algorithms to predict the metal content using the hydrometallurgical reduction of Mn and Co to produce their sulfates	S. Luna
1657	Evaluation of CO ₂ capture from CH ₄ -rich streams through a crossflow polyimide membrane	C. dos Santos Conceicao
1800	Production of ammonia from hydrogen obtained in an electrolysis plant powered by energy from geothermal sources	V. Arias
2061	Neural Network Models for the Optimization of Polymer Plants: The Case of the Industrial Processes of Styrenic Polymers.	J.M. Maffi
2000	Parastripping columns reduce capital and operational cost of edible oils deacidification	C. Paiva
2080	Comparative study of boric acid production from different borates and room temperature	A. Riveros Zapata
2328	Microwave synthesis MCM-41 and its application in CO ₂ capture	M. Oliveira Santos
2364	Conceptual design of a biochar mineral composite for improvements of soils with dolomite and coffee husk from Huila	D.M. Bernal Escobar
2396	Optimization of the reaction of esterification of glycerol with fatty acid	M.A. Maquirriain
2482	Machine learning-based image analysis algorithm as a tool for monitoring inorganic scale	A.A. Cruz

Tuesday 6 June

2532	Development of a Mie–Raman and fluorescence lidar for industrial atmospheric emissions monitoring, applied to industrial flares	L. Pereira
2537	Synthesis Silica/Hkust-1 monolith for CO ₂ adsorption	K.M. Santos
2552	Impact of the ultrasound application on the rheological behavior of suspensions containing malt bagasse and alkaline hydrogen peroxide	M.A. Ribeiro Sanches
2562	Ultrasound-assisted hydration of corn kernels at different temperatures and applied power: Effect on acoustic field, water absorption and germination	J. Telis Romero
2578	Scale-up and cost analysis of biodiesel production using Liquid-Liquid Film Reactors: Reduction in the methanol consumption and investment cost	M. Noriega
2613	Molecular Modeling of Naphtha for Product Optimization	A. Silva
2642	Fluidized Catalytic Cracking (FCC) Unit Simulation via Aspen® Hysys Software:: A Preliminary Study	H.G. Maziero
2675	Evaluation of the required purification steps of residual corn distillers oil for biodiesel production	B. Fonseca Linck
2745	Simulation in Aspen Adsorption of a process for obtaining Li ₂ CO ₃ by using adsorption resins	J.R. Lezama
2776	Technical evaluation of PVC production via computer-aided process engineering	A.D. González-Delgado
2810	The Bifurcation Study of Operational Parameters Effects under the Nonequilibrium Simple Batch Reactive Distillation	G. Silva
2230	Semichemical Pulping of Oil Palm Empty Fruit Bunches (OPEFB)	M. Bustillo
1434	Implementation of a Modular Process Chain for the Recovery of Technology Metals	T. Dobler
3195	A Green Intensified Technology to Extract Essential Oils Using Pulsing Steam	Palomino Infante A. et al.
3174	Studies on the breakup behavior of drop swarms in turbulent flow	Zhou et al.