



**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 6 Renewable and Non-Renewable Energy

Wednesday 7 June, Room 6 (Cinema)

Session #1 ORAL & FLASH ORAL PRESENTATIONS

9:00-9:15	2421	Combustion Reactivity of Valle del Cauca Residual Biomass: Effect of Dry Torrefaction, Wet Torrefaction and Pellets Blends	Torres Arias, et al.
9:15-9:30	1606	Gas Hydrate Thermal and Interfacial Properties and Processes in Gas Capture and Storage for Energy Applications	Mathews et al.
9:30-9:45	1388	Synthesis of a large-scale renewable energy supply networks and sustainable regenerative systems	Potrc et al.
9:45-10:00	2401	Nanostructured materials based on LaNixFe1-xO3-d perovskites supported on CeO2-ZrO2 mixed oxides for dry reforming of methane	Macoretta et al.
10:00-10:05	1275	Scale-up and cost analysis of biodiesel production using Liquid-Liquid Film Reactors: Reduction in the methanol consumption and investment cost	Noriega et al
10:05-10:10	1393	Techno-economic analysis and pyrolysis of the energy cane Saccharum spontaneum for bio-oil production	Olivera et al.
10:10-10:15	1440	The challenges of Upscaling FTO-assembled Photoelectrochemical Devices	Capitano et al.
10:15-10:20	1469	Cycling ageing analysis in 18650 batteries at low temperature	Díaz et al.
10:20-10:25	2463	Processing of symmetric ceramic multilayer by co-tape cast and co-sintering for SOFC/SOEC.	Cuello Laguerre et al.
10:25-10:30		Questions and Discussion of Presentations	

10:30-11:30	Coffee Break and Posters Discussion
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11:30-12:30	Section Plenary Conference: Dr. Eduardo Dvorkin. Lithium industrialization in Argentina
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12:30-14:00	Lunch Interval
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Session #2 ORAL & FLASH ORAL PRESENTATIONS

14:00-14:15	2527	Biodiesel production from low-cost materials and bifunctional catalysts	Romero et al.
14:15-14:30	2652	Valorization of olive mill wastewater through autothermal reforming for renewable hydrogen production	Cerqueria et al.
14:30-14:45	2880	Co-production of advanced biojet fuels and biofuels in efficient integrated production systems	Borjesson et al.
14:45-15:00	2193	Machine learning-based prediction of octane number of fuels supported by the thermodynamic model GCA-EOS	Merlo Raimondi et al.
15:00-15:15	2246	Designing the optimal sustainable supply chain of sugarcane and corn-based bioethanol in Argentina	Ploper et al.
15:25-15:30	1858	Evaluating the Flowability of Sugarcane Biomass for Energy Generation Process	Condotta et al.

15:30-15:35	2142	Torrefaction of sunflower husks in order to improve biofuel characteristics	Kokh-Tatarenko et al.
15:35-15:40	2345	Production of a high carbon jet-fuel precursor from biomass derived furfural and 2-methylfuran using propylsulfonic SBA-15 catalysts	Zanuttini et al.
15:40-15:45	2561	Understanding the differences in behaviour between palm kernel shells and their structural components under pyrolysis conditions	Chico Proano et al.
15:45-15:50	2872	Hydrothermal liquefaction of sugarcane bagasse in the presence of catalyst and hydrogen donor at high heating rate to produce bio-oil with low-oxygen content.	Hernandez Quiroga et al.
15:50-16:00		Questions and Discussion of Presentations	

16:00-16:30	Coffee Break and Posters Discussion		
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Session #3 ORAL & FLASH ORAL PRESENTATIONS

16:30-16:45	2325	Porous Carbon Foam: A Promising Trajectory Towards Decarbonizing Energy Production	Mikkola et al.
16:45-17:00	2377	Green Hydrogen levelized cost assessment from wind energy in Patagonia Argentina	Schmidhalter et al.
17:00-17:15	2979	Technology Readiness Level of Power generation on demand by using Thermal Energy Storage	Baeyens et al.
17:15-17:20	2017	Evaluation of Hybrid Silica-Lignin Nanoparticles as Novel Additives for Water-Based Drilling Fluids	Maffi et al.
17:20-17:25	2094	Feasibility of FCC processability of VGO from Argentinian shale oil and a DCC approximation	García et al.
17:25-17:30	2386	Uniform dispatch and storage of Green Hydrogen from wind energy in Patagonia Argentina. Cost impact.	Schmidhalter et al.

17:30-18:30	Plenary Conference		
18:30-19:30	Posters Discussion		

Thursday 8 June, Room TO BE ADDRESSED

Session #4 ORAL & FLASH ORAL PRESENTATIONS

10:30-11:30	Coffee Break and Posters Discussion
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12:30-14:00	Lunch Interval
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14:00-14:15	1311	Biohydrogen production by <i>Enterobacter cloacae</i> using cashew apple bagasse hydrolysate as feedstock	Borges Reis et al.
14:15-14:30	1631	Auto-machine learning algorithms applied for predicting the physical properties of biodiesel and its blends using mid-infrared spectroscopy data	Luna et al.
14:30-14:45	2009	Simulation of waxy oil rheological properties during a pipeline shutdown	Guimarães et al.
14:45-15:00	2023	A CFD model for the solar pyro-gasification of a wood pellet – Influence of pellet height	Soria et al.
15:00-15:15	2380	Techno-Economic Analysis of Carbon Capture for Standalone Retrofit and CO ₂ Hubs in Steady State Carbon Sources as a tool for Energy Planning and Carbon Taxing Policies in the Brazilian Context	Vitoriano Julio et al.
15:15-15:20	2454	Simplified conical tube network modeling for the characterization of gas diffusion layer	Schmidhalter et al.
15:20-15:25	1759	Multi-Scale Modeling and Simulation of All-Solid-State Sodium-Ion Batteries with Polymer-Ceramic Hybrid Electrolytes	Gerbige et al.
15:25-15:30	1488	Ethane recovery in gas processing plants: Conceptual design of the adsorption separation cycle	Avila et al.
15:30-15:35	2514	Synthesis Of Pt/C Electrocatalyst at High Temperatures for PEM Fuel Cells Via Microwave-Assisted Polyol Method	Ayas et al.
15:35-15:50		Questions and Discussion of Presentations	

16:00-16:30	Coffee Break and Posters Discussion
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Wednesday 7 June, Poster Session #1

1243	Co-hydrolysis of Chilean Oak and Polyethylene: Synergistic Effect and Mechanistic Approach	Alejandro-Martín et al.
1277	Green hydrogen production: Spectroscopy Electrochemical Impedance characterization of a PEM water electrolyzer	Díaz et al.
1283	Oil Shale Heat and Mass Transfer in a Pyrolysis Retort	Moratori et al.
1286	Experimental study of surfactant/nanoparticles formulations in the enhanced recovery of a Colombian heavy crude oil	Jiménez Caballero
1351	Hydrogen production through glycerol and crude glycerol photo-reforming using platinumized bare and N-doped TiO ₂	Musso et al.
1396	Pore-scale resolved 3D simulation of aqueous organic flow batteries	Wolf et al.
1583	Economic and feasibility analysis of obtaining bioenergy through hydrothermal carbonization at an industrial level	Vallejo et al.
1603	Pre-treatment of coffee husk generated by the wet method for biomass applications	de Olivera e Silva et al.
1627	Hydrothermal liquefaction of by-products from the second-generation bioethanol industry	Reyes Plascencia et al.
1638	Effect of the Octane Regulations on the formation of gasoholes prices in Peru	Santillana et al.
1697	Chemical Equilibrium Analysis in Membrane Reactors for Hydrogen Production: Dry and Steam Methane Reforming as Cases of Study	Gómez-Páez et al.
1716	Biorefinery development using spent coffee grounds and orange peels combined with biodiesel production from microbial oil produced by <i>Lipomyces starkeyi</i>	Stylianou et al.
1740	Purification of biodiesel using combined process of ultrafiltration with polymeric membrane and adsorption	Sérgi Gomes et al.
1794	Aviation kerosene and BioLPG from Renewable Vegetable Oils: Hydrotreatment to obtain biofuels	Gomes et al.
2034	Techniques used for the determination of renewable contents present in diesel oil	De Sousa Santos et al.
2155	Valorization of cannabis waste via thermochemical processes	Saires et al.
2531	Synthesis of metal-organic framework MIL-101(Cr) for carbon dioxide and methane adsorption at high pressure	Menezes et al.
2547	Effect of hydrate inhibitors on calcium carbonate formation	Melo-Filho et al.

Thursday 8 June, Poster Session #2

2229	Energy supply stability in H.R.E.S design for green hydrogen production: A mathematical programming approach	Cardenas et al.
2256	Feasibility of an Integrated WEC-Reverse Osmosis Unit	Borzzone
2264	Evaluation of the drying conditions of malt bagasse for energy usage purposes	Alves Felca et al.
2275	Visible – light-driven system aimed at hydrogen generation in presence of Cu ₂ O/TiO ₂ composite photocatalyst	Muscetta et al.
2279	Diazabicycloundecene ionic liquid gels for advanced energy applications	Vucetic et al.
2397	Nanostructured Cu-CeO ₂ /YSZ cermet for SOFC anodes: effect of sintering temperature on the mesostructure and polarization resistance	Sánchez Faba et al.
2412	Metamodeling of the deposition process in oil pre-processing to optimize the cleaning of the heat exchanger network: A systematic review	Santos Soares et al.
2524	Transesterification of waste cooking oil with iron doped clamshell	Cerón Ferrusca et al.
2610	Hydrogenated palm stearin as a renewable phase-change material for low-temperature solar thermal energy storage	Lizcano-González et al.
2641	Hydrothermal carbonization of sugar cane Green Harvesting Residues (GHR): Effect of temperature and water/GHR ratio on thermal, combustion and major elements performance	Guerrero Pérez et al.
2643	Computational Study of Shale Oil Refining: Analysis of Process Variables	Marchioli et al.
2657	Study relating cycle operating variables and design variables of a lithium-ion cell through multi-objective optimization	Aimo et al.
2826	Determination of asphaltene precipitation onsets and spectroscopic characterization of Argentinean crudes	Pinzon Barrantes
2934	The role of curcuminoids additives on biodiesel oxidation	Pais da Silva et al.
2942	SARA Separation and Evaluation of Seven Crude Oils from Argentina	Pinzon Barrantes