



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"

WCCE11-Area 4- BIOTECHNOLOGY, BIOECONOMY, BIOINDUSTRY

Preliminary technical program

Monday June 5, 2023, Oral presentations Room 12

09:00-09:30	2907	KEYNOTE Simulation of the conversion of Japanese waste biomass to light olefins: Evaluation of the CO ₂ conversion via water gas shift reactor and the addition of H ₂	Talero Rojas et al
09:30-09:45	1576	Techno-economic analysis of integrated biorefinery of industrial orange processing wastes	Martins et al.
09:45-10:00	1931	Assessment of single cell oil production in sugarcane biorefineries: techno-economic analysis and climate change impacts	Longati et al.
10:00-10:05	2684	Biotransformation of lignocellulosic biomass into highly valuable bioproducts	Andler, R.
10:05-10:10	1743	Optimization of phosphoric acid pretreatment conditions to produce lactic acid from eucalyptus residues hydrolysates	Moure et al
10:10-10:15	2718	Evaluation of the sugarcane bagasse pretreated with glycerol in the production of fermented sugar	Fernandez Araujo et al
10:15-10:20	2941	Integral use of whey for the joint production of galacto-oligosaccharides, probiotics and lactic acid. Prospects for a synbiotic product	Oliveros Pineda et al
10:20-10:30	Questions flash oral presentations		
10:30-11:00	Coffee Break and Posters Discussion		
11:00-11:15	1895	Bio-based solvents as extractant agent to recover carotenoids from <i>Rodothorula glutinis</i> biomass	Rocha et al.
11:15-11:20	2624	Adsorption-Desorption Processes for Recovery of Volatile Fatty Acids from Dilute Aqueous Streams	Elhami et al
11:20-11:25	1276	Fatty Acid Solvent Extraction from Palm Oil using Liquid-Liquid Film Contactor: Mathematical model Including Mass Transfer Effects	Noriega et al
11:25-11:30	1248	Experimental determination and modeling of the solubility of	Pulido et al



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		Cannabidiol (CBD) in pure solvents	
11:30-12:30			
12:30-14:00	Lunch Interval		
14:00-14:15	2898	Development of Hydrogel from Decellularized Whole Porcine Kidney	Mondragon-Dugos et al
14:15-14:30	2059	Pure fatty acids as only carbon source in the production of polyhydroxyalkanoates (PHAs) by <i>Cupriavidus necator</i> CECT 4635	Ridella et al
14:30-14:45	1862	Degradation and biological recycling of post-consumer poly(3-hydroxybutyrate) based bioplastics	Argeiti et al
14:45-14:50	2452	In silico exploration of PHBV production by a genome-scale model of <i>Cupriavidus necator</i>	Ascencio Galvan et al
14:50-14:55	1764	Porogens addition in chitin-based chromatographic supports. Impact on chromatographic and structural properties.	Pilato et al
14:55-15:00	1554	Closing the whey cycle in the dairy industry: Development and environmental assessment of whey protein films	Etxabide Guerrero et al
15:00-15:05	2626	Bio-valorization of vinasse for enhancement polyhydroxyalkanoates production: a bibliometric analysis	Dorado Lasso et al
15:05-15:15	Questions flash oral presentations		
15:15-15:30	1565	Bacterial cellulose production via pretreatment of lignocellulosic waste stream using dielectric barrier discharge air plasma	Filippi et al
15:30-15:45	1765	Development of bio-specific adsorbent films for biotechnological applications based on sustainable polymer	Greppi Pilato et al
15:45-15:50	1549	Evaluation of the molecular weight of the alginate by changes in the agitation rate in <i>Azotobacter vinelandii</i> cultures	Ponce et al
15:50-15:55	1981	Bioprocess development for poly(3-hydroxybutyrate) production and property evaluation	Psaki et al
15:55-16:00	Questions flash oral presentations		
16:00-16:30	Coffee Break and Posters Discussion		
16:30-16:45	2049	Development of a novel high-throughput assay for screening microbial proteolytic activity relevant to biogas production.	Potenza et al



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16:45-17:00	1649	Is It Possible to Prevent Aggregation of α -Crystallin by Adding Sterols?	Li, K – Forciniti, D.
17:00-17:05	1264	Tailor-made biotechnology of filamentous microorganisms linking morphology and process environment	Dinius et al
17:05-17:10	1334	Morphology engineering for novel lantibiotics - how salt-enhanced cultivation affects product formation and filamentous cellular morphology	Kozanecka et al
17:10-17:15	2729	Standardization of a culture medium for bioplastic production using cacao fruit residues and a native strain	Suarez et al
17:15-17:20	2756	Effect of the cycle length on the PHA accumulation under uncoupled aerobic dynamic feeding	Varela et al
17:20-17:30	Questions flash oral presentations		
17:30-18:30	Plenary Conference		
18:30-19:30	Posters Discussion		



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Monday June 5, 2023, POSTERS SESSION

1196	A techno-economic assessment of cannabis oil (<i>Cannabis sativa</i> L.) extraction process. A Colombian perspective in an emergent market	Diaz, M. – Davila, J.
1360	Bioconversion of citrus by-product by <i>Talaromyces amestolkiae</i> to natural colorants: fungal biorefinery approach towards a circular bioeconomy	Lima et al
1451	Cannabidiol concentrates by means of Molecular Distillation: Pilot-scale case	Idárraga Vélez et al
1478	Production of enzymes by fermentation in a solid medium using agroindustrial by-products	Gomez Ramos et al.
1555	Influence of retention time and substrate-microorganism ratio on the acidogenic fermentation of wastewater from the cassava starch extraction process for the production of volatile fatty acids	Sanchez Ledesma et al
1580	Biotechnological Production of Cellulose Nanocrystals through Enzymatic Hydrolysis of Different Agroindustrial Wastes	Da Silva, M. - Goldbeck, R.
1604	Production of natural colorants by <i>Talaromyces amestolkiae</i> applying different carbon sources: an initial approach to biorefinery	Lima, C. Santos Ebinuma, V.
1636	Evaluation of dyeing polyamide fabric pretreated with protease	Imme et al.
1650	Effect of Methanol and Glycerol on the Structure of Human Serum Albumin Solutions	Naka, P. – Forciniti, D.
1651	Effect of glycosylation on the aggregation of insulin A-chain fragments	Naka, P. – Forciniti, D.
1706	Preliminary evaluation of Flavourzyme, Savinase and Alcalase concentrations in the hydrolysis of soybean meal proteins	Porto et al
1708	Optimization of revalorization process from wine industry residual biomass	Bonfilgi et al



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Tuesday June 6, 2023, Oral presentations Room 12

09:00-09:30	1247	KEYNOTE Cell-based assays in a fully sensor equipped and automated capillary-wave microreactor	Viebrock et al
09:30-09:45	2571	Challenges in the synthesis of clavulanic acid and constraint-based models of <i>Streptomyces clavuligerus</i>	Ramirez Malule et al
09:45-10:00	1838	Dynamic in silico assessment of potential gene targets for enhancing clavulanic acid production in <i>Streptomyces clavuligerus</i> submerged cultures	Gomez Rios et al
10:00-10:05	1717	Evaluation of biosurfactant production by fungi associated with cassava stems and leaves aiming at industrial application	Morandim Giannetti, A.A - Marelli, M.S.
10:05-10:10	1897	Biotechnological production of fungal colorants with potential as photosensitizer for antimicrobial photodynamic therapy	Almeida - Santos Ebinuma et al
10:10-10:15	2234	Valorization of milk whey obtaining lactic acid by using a co-culture and hydrolysis: a kinetic approach to the fermentation process	Rojas Quimbaja et al
10:15-10:30	Questions flash oral presentations		
10:30-11:30	Coffee Break and Posters Discussion		
11:30-11:45	1602	Addition of polyols and cyclodextrins to modify the catalysis of levansucrase and the process of levan self-assembly	Gonzalez Garcinuño et al
11:45-11:50	2241	Production of prebiotic galactooligosaccharides from whey by a combined enzymatic system of commercial beta-galactosidases and glucose oxidase	Oliveros Pineda et al
11:50-11:55	2296	L-Asparaginase thermal stability study and application as acrylamide mitigation agent in potato chips	Bento et al
11:55-12:05	Questions flash oral presentations		
12:05-12:10	2917	Formate Dehydrogenase modified biocathode for the simultaneous electrochemical regeneration of NADH and formic acid production from carbon dioxide	Maureira et al



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12:10-12:15	1592	Optimization of the solvent extraction conditions of pine knots for the evaluation of their performance as a wood preservative	Rodao et al
12:15-12:20	1924	Optimization of an ecofriendly pectin extraction from Rosa rubiginosa L. husk by response surface method	Riveros Gomez et al
12:20-12:30	Questions flash oral presentations		
12:30-14:00	Lunch Interval		
14:00-14:30	2694	KEYNOTE Biofilm-based Cultivation: A High Throughput and Energy-Efficient Platform for Biological Methane/Biogas Conversion	Badr et al
14:30-14:45	1557	Utilization of fatty acids and food wastes by enriched environmental bacteria towards energy generation via defined co-cultivation with Geobacter sulfurreducens	Schepergerdes et al.
14:45-15:00	1964	REnergized (REthinking, REengineering, REevaluating) recovery of Rare Earth Elements from Waste Printed Circuit Boards: a bioleaching approach	Gonzalez Baez et al.
15:00-15:15	2960	Effect of solid retention time over nitrogen removal and CO ₂ emission in microalgae-bacteria system	Arango et al.
15:15-15:30	1407	Kinetic characterization of digestive proteinases extracted from the processing waste of South Atlantic fish	Friedman, I - Contreras, E. et al
15:30-15:35	1608	Lignocellulosic waste materials as a key component of passive systems for alkaline wastewater treatment	Drewniak et al.
15:35-15:40	1664	Assessment of bisphenol-a removal in a moving bed biofilm reactor and the impacts on nitrification and degradation of organic matter	Mello et al.
15:40-15:45	2498	A Cost-Effective Screening Station Expedites the Identification of the Optimal Methanotroph-Microalgae Cocultures for a Novel Waste-to-Value Technology	Loyal Murphy et al.
15:45-16:00	Questions flash oral presentations		
16:00-16:30	Coffee Break and Posters Discussion		
16:30-17:30	Plenary Conference		
17:30-18:30	Round Tables and Posters Discussion		



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1497	Experimental and theoretical growth of the probiotic bacteria <i>Lactobacillus rhamnosus</i> in whey permeate	Porporato, M. – Nicolau, V.
1714	Production of gibberellic acid (GA3) from <i>Fusarium fujikuroi</i> by submerged fermentation	Porto et al
1727	Characterization of the biochemical and kinetic properties of lipase from <i>Burkholderia cepacia</i> immobilized on diatomaceous earth support	Hidalgo et al
1731	Optimization of transglutaminase production by fungi associated with <i>Manihot esculenta</i> , Crantz stems and leaves	Morandim Giannetti - Oshikata
1749	Determination of the kinetic and thermodynamic parameters of the enzymatic synthesis of hexyl oleate ester	Assis et al
1753	Evaluation of sulfamethoxazole antibiotic removal using a mobile bed reactor with biofilm	Lima et al
1771	Biofloculants as a biotechnological solution to microplastics pollution	Salehizadeh , H.
1801	Carotenoids production by mutant strains of <i>Flavobacterium</i> spp. Y <i>Chryseobacterium</i> sp. P36 obtained by UV radiation	Pena, S. - Saravia , V.
1839	Model-based optimization of a conventional SBR process for biological C, N, and P removal from wastewaters	Santa Cruz et al
1902	Characterization of magnetized copolymer for enzyme immobilization and application in emollient ester synthesis	Assis, G.- Freitas, L. et al
1932	Influence of C/N ratio and medium composition on <i>Rhodotorula toruloides</i> production of microbial oil and carotenoids	Vaz, L. – Miranda, E. et al
2099	Production of exopolysaccharides by <i>Ensifer meliloti</i> in different culture media with soybean molasses	Ferreira Filho et al.
2151	Production of biosurfactant by <i>Acinetobacter venetianus</i> AMO1502: Evaluation of the operational conditions	D'Almeida et al.



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Wednesday June 7, 2023, POSTERS SESSION

2161	Optimization of vinasse spray-drying	Trape et al.
2228	Characterization of low-density polyethylene (LDPE) degradation activity by cocultures of the genus <i>Aspergillus</i> sp in synergy with microbiota present in composting	Garcia Rojas et al.
2286	Urease immobilized on zeolites produced from fly ash – a value added product for bioremediation of diverse waste	Dabrowska et al
2293	Increasing microalgae production and preventing biofilm formation in a horizontal tubular photobioreactor	Belohlav - Jiorut
2307	Use of hydrolysates from waste microalgal biomass for bioplastics production by <i>Paracoccus denitrificans</i> . A preliminary study	Pila et al.
2376	Valorization of industrial side-streams towards high value-added food products by microalgae cultivation	Kelingesinds et al.
2423	Simulation of the enzymatic clarification of glucose syrups from agro-industrial wastes	Morales et al
2444	Co-fermentation of pentoses and hexoses from lignocellulosic material for 2G ethanol production	Kemita, L. - Pratto, B.
2478	Diesel oil biodegradation and biosurfactant production by <i>Acinetobacter venetianus</i> AMO1502	Oliveira et al
2555	Enzymatic biolubricant production by lipase B from <i>Candida antarctica</i> immobilized on lignin-magnetite composite	Levy et al.
2573	Evaluation of commercial silica drying pretreatment techniques in multipoint covalent immobilization of Eversa Transform 2.0	Carvalho et al
2581	Analysis of <i>Azotobacter vinelandii</i> OP cultures using apple waste for the production of polyhydroxybutyrate (PHB).	Rojas et al.
2590	Screening of <i>Burkholderia cepacia</i> lipase immobilized in different supports for esterification of FFA of Licuri oil	Rodrigues et al.



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Thursday June 8, 2023, POSTERS SESSION

2596	A strategy for the selection of promising value-added products from forest and agricultural resources in the Northeastern Argentinian Region (NEA)	Rivaldi et al.
2627	Evaluation of hydraulic and solid retention time on the removal of nutrients and organic matter from a municipal wastewater	Nashiro et al.
2632	Production and characterization of Latex clearing protein enzyme from <i>Rhodococcus rhodochrous</i> .	Guajardo, C - Andler, R.
2687	Comparative study of biodiesel production from Babassu Oil (<i>Orbignya sp.</i>) using Eversa lipase and CALB as biocatalyst	Jeferson et al.
2698	Valorization of residual glycerol from the biodiesel industry in products with high added value biocatalyzed by the enzyme Eversa Transform 2.0	Goncalves et al.
2723	Study of the production of citronellyl pentanoate ester by lipase immobilized on magnetic nanoparticles conjugated with lignin from cashew apple bagasse	Prasilde Rocha et al.
2744	Production of polyhydroxyalkanoates from volatile fatty acid mixtures by pure culture action	Vergara et al.
2750	Modeling and Simulation of Batch Enzymatic Reactors for the Ethyl Levulinate Synthesis	Santos, T. - Langone, M. et al.
2755	Evaluation of the nutritional supplementation of sugarcane straw hemicellulose hydrolyzate for biosurfactant production by <i>Naganishia adeliensis</i>	Alva-Sanchez et al.
2870	Engineering cell release processes for the production of biopharmaceuticals	Paiva, G. - Pedrolli, D.
2908	Evaluation of FDH and GlyDH immobilization on different types of mesoporous silica	Garcia Uribe et al.
2938	Evaluation of two different β -galactosidase enzymes based on the operating windows for fructose syrup production	Clavero et al.
2945	Bioalcohol production from regional wastes	Orofino et al.
2952	Techno-economic assessment of the production of broccoli heterologous myrosinase from <i>S. cerevisiae</i> MGY70-myr	Jimenez et al.
2955	Production of lactulose catalyzed by magnetic crosslinked enzymatic aggregates (mCLEAs) of β -galactosidase from <i>Aspergillus Oryzae</i>	Araujo Maia et al.
2966	Transformation of tannery wastewater by advanced oxidation processes for the prod of algae-based metabolites	Urbina et al.