Carlos A Cardona Alzate

List of Publications by Year
in descending order

126	7,410	71102	56724
papers	citations	41 h-index	83 g-index

129	129	129	7280
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Trends in biotechnological production of fuel ethanol from different feedstocks. Bioresource Technology, 2008, 99, 5270-5295.	9.6	1,450
2	Fuel ethanol production: Process design trends and integration opportunities. Bioresource Technology, 2007, 98, 2415-2457.	9.6	818
3	Fuel ethanol production from sugarcane and corn: Comparative analysis for a Colombian case. Energy, 2008, 33, 385-399.	8.8	262
4	Acid pretreatment of lignocellulosic biomass for energy vectors production: A review focused on operational conditions and techno-economic assessment for bioethanol production. Renewable and Sustainable Energy Reviews, 2019, 107, 587-601.	16.4	227
5	Energy consumption analysis of integrated flowsheets for production of fuel ethanol from lignocellulosic biomass. Energy, 2006, 31, 2447-2459.	8.8	205
6	Design strategies for sustainable biorefineries. Biochemical Engineering Journal, 2016, 116, 122-134.	3.6	205
7	Techno-economic analysis of bioethanol production from lignocellulosic residues in Colombia: A process simulation approach. Bioresource Technology, 2013, 139, 300-307.	9.6	153
8	Integrating first, second, and third generation biorefineries: Incorporating microalgae into the sugarcane biorefinery. Chemical Engineering Science, 2014, 118, 126-140.	3.8	143
9	Techno-economic analysis for a sugarcane biorefinery: Colombian case. Bioresource Technology, 2013, 135, 533-543.	9.6	130
10	Empty fruit bunches from oil palm as a potential raw material for fuel ethanol production. Biomass and Bioenergy, 2011, 35, 1130-1137.	5.7	121
11	Evaluation of biogas and syngas as energy vectors for heat and power generation using lignocellulosic biomass as raw material. Electronic Journal of Biotechnology, 2018, 33, 52-62.	2.2	121
12	Design and analysis of biorefineries based on raw glycerol: Addressing the glycerol problem. Bioresource Technology, 2012, 111, 282-293.	9.6	119
13	Comparison of lignin extraction processes: Economic and environmental assessment. Bioresource Technology, 2016, 214, 468-476.	9.6	112
14	Process integration possibilities for biodiesel production from palm oil using ethanol obtained from lignocellulosic residues of oil palm industry. Bioresource Technology, 2009, 100, 1227-1237.	9.6	109
15	Techno-economic analysis for brewerâ€™s spent grains use on a biorefinery concept: The Brazilian case. Bioresource Technology, 2013, 148, 302-310.	9.6	100
16	Design and analysis of poly-3-hydroxybutyrate production processes from crude glycerol. Process Biochemistry, 2011, 46, 310-317.	3.7	98
17	Novel chitosan membranes as support for lipases immobilization: Characterization aspects. Carbohydrate Polymers, 2010, 79, 9-16.	10.2	96
18	Valorization of glycerol through the production of biopolymers: The PHB case using Bacillus megaterium. Bioresource Technology, 2013, 133, 38-44.	9.6	93

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19	Comparison of feedstocks and technologies for biodiesel production: An environmental and techno-economic evaluation. Renewable Energy, 2014, 69, 479-487.	8.9	90
20	Techno-economic and environmental assessment of an olive stone based biorefinery. Resources, Conservation and Recycling, 2014, 92, 145-150.	10.8	84
21	Biosynthesis of PHB from a new isolated Bacillus megaterium strain: Outlook on future developments with endospore forming bacteria. Biotechnology and Bioprocess Engineering, 2012, 17, 250-258.	2.6	68
22	Comparison of the biochemical and thermochemical routes for bioenergy production: A techno-economic (TEA), energetic and environmental assessment. Energy, 2019, 172, 232-242.	8.8	66
23	Process Simulation of Fuel Ethanol Production from Lignocellulosics using Aspen Plus. Industrial & Engineering Chemistry Research, 2011, 50, 6205-6212.	3.7	60
24	Techno-economic and environmental assessment of essential oil extraction from Oregano (Origanum) Tj ETQq0 0 0 rgBT /Overlock 10 T 172-181.	9.3	59
25	Fermentation, thermochemical and catalytic processes in the transformation of biomass through efficient biorefineries. Catalysis Today, 2018, 302, 61-72.	4.4	58
26	Use of residual banana for polyhydroxybutyrate (PHB) production: Case of study in an integrated biorefinery. Waste Management, 2014, 34, 2634-2640.	7.4	57
27	Thermochemical processing of woody biomass: A review focused on energy-driven applications and catalytic upgrading. Renewable and Sustainable Energy Reviews, 2021, 136, 110376.	16.4	57
28	A model biorefinery for avocado (Persea americana mill.) processing. Bioresource Technology, 2017, 243, 17-29.	9.6	56
29	Integral use of orange peel waste through the biorefinery concept: an experimental, technical, energy, and economic assessment. Biomass Conversion and Biorefinery, 2021, 11, 645-659.	4.6	54
30	Selection of Process Pathways for Biorefinery Design Using Optimization Tools: A Colombian Case for Conversion of Sugarcane Bagasse to Ethanol, Poly-3-hydroxybutyrate (PHB), and Energy. Industrial & Engineering Chemistry Research, 2013, 52, 4132-4145.	3.7	52
31	Design and analysis of a second and third generation biorefinery: The case of castorbean and microalgae. Bioresource Technology, 2015, 198, 836-843.	9.6	52
32	CO-gasification of pelletized wood residues. Fuel, 2009, 88, 437-445.	6.4	48
33	Conceptual design of cost-effective and environmentally-friendly configurations for fuel ethanol production from sugarcane by knowledge-based process synthesis. Bioresource Technology, 2012, 104, 305-314.	9.6	48
34	Techno-Economic and Environmental Analysis of Ethanol Production from 10 Agroindustrial Residues in Colombia. Energy & Fuels, 2015, 29, 775-783.	5.1	46
35	Analysis of the environmental impact of butylacetate process through the WAR algorithm. Chemical Engineering Science, 2004, 59, 5839-5845.	3.8	45
36	Wood residue (Pinus patula bark) as an alternative feedstock for producing ethanol and furfural in Colombia: experimental, techno-economic and environmental assessments. Chemical Engineering Science, 2016, 140, 309-318.	3.8	45

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37	Design and analysis of fuel ethanol production from raw glycerol. Energy, 2010, 35, 5286-5293.	8.8	44
38	Supercritical fluid extraction for enhancing polyphenolic compounds production from olive waste extracts. Journal of Chemical Technology and Biotechnology, 2020, 95, 356-362.	3.2	44
39	Social and techno-economical analysis of biodiesel production in Peru. Energy Policy, 2012, 43, 427-435.	8.8	43
40	A comprehensive review on the implementation of the biorefinery concept in biodiesel production plants. Biofuel Research Journal, 2017, 4, 691-703.	13.3	43
41	Techno-economic and energetic assessment of hydrogen production through gasification in the Colombian context: Coffee Cut-Stems case. International Journal of Hydrogen Energy, 2017, 42, 5849-5864.	7.1	42
42	Methods for designing and assessing biorefineries: Review. Biofuels, Bioproducts and Biorefining, 2019, 13, 789-808.	3.7	42
43	Importance of stability study of continuous systems for ethanol production. Journal of Biotechnology, 2011, 151, 43-55.	3.8	41
44	Evolution from biofuels to integrated biorefineries: techno-economic and environmental assessment of oil palm in Colombia. Journal of Cleaner Production, 2014, 81, 51-59.	9.3	41
45	A biorefinery for efficient processing and utilization of spent pulp of Colombian Andes Berry (Rubus) Tj ETQq1 1 0.784314 rgBT /Over Technology, 2017, 223, 227-236.	9.6	41
46	Techno-economic and Environmental Assessment of p-Cymene and Pectin Production from Orange Peel. Waste and Biomass Valorization, 2015, 6, 253-261.	3.4	40
47	Stand-alone and biorefinery pathways to produce hydrogen through gasification and dark fermentation using Pinus Patula. Journal of Environmental Management, 2017, 203, 695-703.	7.8	40
48	Techno-economic and environmental assessment of essential oil extraction from Citronella (Cymbopogon winteriana) and Lemongrass (Cymbopogon citrus): A Colombian case to evaluate different extraction technologies. Industrial Crops and Products, 2014, 54, 175-184.	5.2	39
49	Techno-economic and environmental assessment of biogas production from banana peel (Musa) Tj ETQq1 1 0.784314 rgBT /Overlock 35971-35980.	5.3	38
50	Parameters estimation and VLE calculation in asymmetric binary mixtures containing carbon dioxide+n-alkanols. Fluid Phase Equilibria, 2009, 275, 1-7.	2.5	37
51	A biorefinery approach for the production of xylitol, ethanol and polyhydroxybutyrate from brewerâ€™s spent grain. AIMS Agriculture and Food, 2016, 1, 52-66.	1.6	37
52	Agricultural Waste Management Through Energy Producing Biorefineries: The Colombian Case. Waste and Biomass Valorization, 2016, 7, 789-798.	3.4	36
53	Energetic and environmental assessment of thermochemical and biochemical ways for producing energy from agricultural solid residues: Coffee Cut-Stems case. Journal of Environmental Management, 2018, 216, 160-168.	7.8	36
54	Potential raw materials for biorefineries to ensure food security: The Cocoyam case. Industrial Crops and Products, 2018, 126, 92-102.	5.2	36

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55	Performance evaluation and economic analysis of the bioethanol and flour production using rejected unripe plantain fruits (Musa paradisiaca L.) as raw material. Food and Bioproducts Processing, 2020, 121, 29-42.	3.6	36
56	Ethanol Dehydration by Adsorption with Starchy and Cellulosic Materials. Industrial & Engineering Chemistry Research, 2009, 48, 6783-6788.	3.7	35
57	Pre-feasibility analysis of the production of mucic acid from orange peel waste under the biorefinery concept. Biochemical Engineering Journal, 2020, 161, 107680.	3.6	33
58	Techno-Economic Analysis of the Use of Fired Cogeneration Systems Based on Sugar Cane Bagasse in South Eastern and Mid-Western Regions of Mexico. Waste and Biomass Valorization, 2014, 5, 189-198.	3.4	32
59	Production of Bioethanol from Agroindustrial Residues as Feedstocks. , 2011, , 251-285.		31
60	Analysis of coffee cut-stems (CCS) as raw material for fuel ethanol production. Energy, 2011, 36, 4182-4190.	8.8	31
61	Economic and environmental assessment of syrup production. Colombian case. Bioresource Technology, 2014, 161, 84-90.	9.6	30
62	Energy Efficiency of Biorefinery Schemes Using Sugarcane Bagasse as Raw Material. Energies, 2018, 11, 3474.	3.1	29
63	Insights into the economic viability of cellulases recycling on bioethanol production from recycled paper sludge. Bioresource Technology, 2018, 267, 347-355.	9.6	29
64	Effect of co-digestion of milk-whey and potato stem on heat and power generation using biogas as an energy vector: Techno-economic assessment. Applied Energy, 2019, 241, 504-518.	10.1	28
65	Strategy for the selection of the minimum processing scale for the economic feasibility of biorefineries. Biofuels, Bioproducts and Biorefining, 2019, 13, 107-119.	3.7	28
66	Analysis of the Production Process of Optically Pure d-Lactic Acid from Raw Glycerol Using Engineered Escherichia coli Strains. Applied Biochemistry and Biotechnology, 2012, 166, 680-699.	2.9	26
67	Optimization of the Colombian biodiesel supply chain from oil palm crop based on techno-economical and environmental criteria. Energy Economics, 2015, 47, 154-167.	12.1	26
68	Phase equilibrium calculations for carbon dioxide+n-alkanes binary mixtures with the Wongâ€“Sandler mixing rules. Fluid Phase Equilibria, 2006, 239, 206-212.	2.5	25
69	Design and analysis of antioxidant compounds from Andes Berry fruits (Rubus glaucus Benth) using an enhanced-fluidity liquid extraction process with CO2 and ethanol. Journal of Supercritical Fluids, 2012, 62, 96-101.	3.2	25
70	Analysis of potential technological schemes for the development of oil palm industry in Colombia: A biorefinery point of view. Industrial Crops and Products, 2014, 52, 457-465.	5.2	24
71	Analysis of Extraction Kinetics of Bioactive Compounds from Spent Coffee Grounds (Coffea arÃ¡bica). Waste and Biomass Valorization, 2018, 9, 2381-2389.	3.4	24
72	Sustainable Biorefineries: What was Learned from the Design, Analysis and Implementation. Journal of Sustainable Development of Energy, Water and Environment Systems, 2020, 8, 88-117.	1.9	23

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73	Techno-economic analysis of bioethanol production in Africa: Tanzania case. Energy, 2012, 48, 442-454.	8.8	22
74	Production of Bioethanol UsingChlorella vulgarisCake: A Technoeconomic and Environmental Assessment in the Colombian Context. Industrial & Engineering Chemistry Research, 2013, 52, 16786-16794.	3.7	22
75	Integrated Production of Different Types of Bioenergy from Oil Palm Through Biorefinery Concept. Waste and Biomass Valorization, 2016, 7, 737-745.	3.4	22
76	Economic and social assessment of biorefineries: The case of Coffee Cut-Stems (CCS) in Colombia. Bioresource Technology Reports, 2020, 9, 100397.	2.7	22
77	Thermochemical, Biological, Biochemical, and Hybrid Conversion Methods of Bio-derived Molecules into Renewable Fuels. , 2019, , 59-81.		21
78	Production and purification of xylitol by Scheffersomyces amazonenses via sugarcane hemicellulosic hydrolysate. Biofuels, Bioproducts and Biorefining, 2020, 14, 344-356.	3.7	21
79	The Colombian biofuel supply chains: The assessment of current and promising scenarios based on environmental goals. Energy Policy, 2014, 67, 232-242.	8.8	20
80	Effect of volumetric oxygen transfer coefficient (k L a) on ethanol production performance by Scheffersomyces stipitis on hemicellulosic sugarcane bagasse hydrolysate. Biochemical Engineering Journal, 2016, 112, 249-257.	3.6	20
81	The biorefinery concept for the industrial valorization of coffee processing by-products. , 2017, , 63-92.		20
82	Study of biorefineries based on experimental data: production of bioethanol, biogas, syngas, and electricity using coffee-cut stems as raw material. Environmental Science and Pollution Research, 2021, 28, 24590-24604.	5.3	19
83	Objective functions analysis in the minimization of binary VLE data for asymmetric mixtures at high pressures. Fluid Phase Equilibria, 2006, 248, 147-157.	2.5	17
84	Propionic Acid Production from Raw Glycerol Using Commercial and Engineered Strains. Industrial & Engineering Chemistry Research, 2012, 51, 2354-2361.	3.7	17
85	Techno-Economic and Environmental Analysis of Biogas Production from Plantain Pseudostem Waste in Colombia. Waste and Biomass Valorization, 2020, 11, 3161-3171.	3.4	17
86	Comparison of acid sulfonic mesostructured silicas for 1-butylacetate synthesis. Materials Chemistry and Physics, 2010, 121, 215-222.	4.0	16
87	Growth and Oil Extraction from Chlorella vulgaris: A Techno-Economic and Environmental Assessment. Industrial & Engineering Chemistry Research, 2012, 51, 10503-10508.	3.7	16
88	Environmental assessment of hydrogen production based on Pinus patula plantations in Colombia. Energy, 2017, 139, 606-616.	8.8	16
89	Experimental measurements of vaporâ€“liquid equilibria at low pressure: Systems containing alcohols, esters and organic acids. Fluid Phase Equilibria, 2010, 287, 141-145.	2.5	15
90	Process synthesis for antioxidant polyphenolic compounds production from Matisia cordata Bonpl. (zapote) pulp. Journal of Food Engineering, 2014, 134, 5-15.	5.2	15

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91	Analysis of the Coffee Cut Stems as Raw Material for the Production of Sugars for Acetoneâ€“Butanolâ€“Ethanol (ABE) Fermentation: Techno-Economic Analysis. Waste and Biomass Valorization, 2019, 10, 3793-3808.	3.4	15
92	Thermodynamic consistency of experimental VLE data for asymmetric binary mixtures at high pressures. Fluid Phase Equilibria, 2010, 293, 1-10.	2.5	13
93	Technical and economic potential evaluation of the strain Escherichia coli MS04 in the ethanol production from glucose and xylose. Biochemical Engineering Journal, 2018, 140, 123-129.	3.6	12
94	An integral methodological approach for biorefineries design: Study case of Colombian coffee cut-stems. Computers and Chemical Engineering, 2019, 126, 35-53.	3.8	12
95	Analysis and Design of Extractive Fermentation Processes Using a Novel Short-Cut Method. Industrial & Engineering Chemistry Research, 2013, 52, 12915-12926.	3.7	11
96	Water uptake, chemical characterization, and tensile behavior of modified bananaâ€“plantain fiber and their polyester composites. Polymer Composites, 2016, 37, 2960-2973.	4.6	11
97	Comparison of furfural and biogas production using pentoses as platform. Science of the Total Environment, 2020, 728, 138841.	8.0	11
98	Biorefinery potential ofEucalyptus grandisto produce phenolic compounds and biogas. Canadian Journal of Forest Research, 2021, 51, 89-100.	1.7	11
99	Analysis of technological schemes for the efficient production of added-value products from Colombian oleochemical feedstocks. Process Biochemistry, 2014, 49, 474-489.	3.7	9
100	Potential of the amazonian exotic fruit for biorefineries: The Theobroma bicolor (Makambo) case. Industrial Crops and Products, 2016, 86, 58-67.	5.2	9
101	Glycerol bioconversion in unconventional magnetically assisted bioreactor seeking whole cell biocatalyst (intracellular lipase) production. Chemical Engineering Research and Design, 2016, 111, 243-252.	5.6	9
102	Analysis of bioenergy production at different levels of integration in energy-driven biorefineries. Clean Technologies and Environmental Policy, 2018, 20, 1599-1613.	4.1	9
103	Cementicious Materials Reinforcement Using Angustifolia kunth Bamboo Fiber Covered with Nanostructured Manganese Oxide. Industrial & Engineering Chemistry Research, 2014, 53, 8452-8463.	3.7	8
104	AnÃ¡lisis y caracterizaciÃ³n de materiales amilÃ¡ceos y celulÃ³sicos despuÃ©s de modificaciÃ³n enzimÃ¡tica. DYNA (Colombia), 2016, 83, 44.	0.4	8
105	Influence of Fluid Concentration on the Elevation of Boiling Point of Blackberry Juice. International Journal of Food Properties, 2008, 11, 865-875.	3.0	6
106	Solubility of some phenolic acids contained in citrus seeds in supercritical carbon dioxide: Comparison of mixing rules, influence of multicomponent mixture and model validation. Theoretical Foundations of Chemical Engineering, 2013, 47, 381-387.	0.7	6
107	Analysis of a biorefinery based on Theobroma grandiflorum (copoazu) fruit. Biomass Conversion and Biorefinery, 2015, 5, 183-194.	4.6	6
108	Integral use of plants and their residues: the case of cocoyam (Xanthosoma sagittifolium) conversion through biorefineries at small scale. Environmental Science and Pollution Research, 2018, 25, 35949-35959.	5.3	6

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109	Design and economic analysis of the technological scheme for 1,3-propanediol production from raw glycerol. Theoretical Foundations of Chemical Engineering, 2013, 47, 239-253.	0.7	5
110	Bifurcation analysis of dynamic process models using Aspen DynamicsÂ® and Aspen Custom ModelerÂ®. Computers and Chemical Engineering, 2014, 62, 10-20.	3.8	5
111	Optimization on the Use of Crude Glycerol from the Biodiesel Production to Obtain Poly-3-Hydroxybutyrate. , 2011, , .		5
112	Degrees of freedom analysis for a distillation column. Theoretical Foundations of Chemical Engineering, 2010, 44, 686-697.	0.7	4
113	The integral use of aromatic plants: prefeasibility comparison of stand-alone and biorefinery processes using thyme (Thymus vulgaris) as base case. Biomass Conversion and Biorefinery, 2021, 11, 681-691.	4.6	4
114	Risk index to monitor an anaerobic digester using a dynamic model based on dilution rate, temperature, and pH. Nonlinear Engineering, 2019, 9, 35-50.	2.7	3
115	Extraction of phenolic compounds from spent blackberry pulp by enhancedâ€fluidity liquid extraction. AICHE Journal, 2019, 65, e16609.	3.6	3
116	Fermentative Production of Ethanol Using Pinus patula as Raw Material: Economic and Energy Assessment. Waste and Biomass Valorization, 2020, 11, 1777-1788.	3.4	3
117	Economic and Energy Valorization of Cassava Stalks as Feedstock for Ethanol and Electricity Production. Bioenergy Research, 2020, 13, 810-823.	3.9	3
118	Modeling of bioethanol production in unconventional bioreactor assisted by electromagnetic field. International Journal of Energy Research, 2017, 41, 103-112.	4.5	2
119	Application of Thermodynamic-Topological Analysis in the Design of Biorefineries: Development of a Design Strategy. Theoretical Foundations of Chemical Engineering, 2019, 53, 166-184.	0.7	2
120	Effect of the lignin extraction process on the economics of a woody-based biorefinery. Computer Aided Chemical Engineering, 2021, 50, 1871-1876.	0.5	2
121	New Perspectives in C1-4 Acetates Production Using Reactive Distillation: Acetic Acid or Acetic Anhydride as Raw Materials. Chemie-Ingenieur-Technik, 2001, 73, 623-623.	0.8	1
122	Stoichiometric restrictions on operating modes in chemical technology. Chemical Engineering Science, 2018, 192, 642-654.	3.8	1
123	Analysis of the environmental impact using the waste reduction algorithm in polypropylene production by applying grade transitions strategies in Colombia. Environmental Science and Pollution Research, 2019, 26, 35533-35542.	5.3	1
124	Optimization of esterification and transesterification of esters based on experiment planning. Theoretical Foundations of Chemical Engineering, 2014, 48, 104-112.	0.7	0
125	Cocaine degradation using a rotating biological disc reactor: Techno-economic and environmental analysis using experimental data. Journal of Hazardous Materials, 2021, 404, 124219.	12.4	0
126	Efecto del cambio en el uso de la tierra en la obtenciÃ³n de palma aceitera para la producciÃ³n de biodiesel en Colombia. Ingenieria Y Universidad, 2014, 18, .	0.5	0