

Carlos A Cardona Alzate

List of Publications by Year in descending order

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126
papers

7,410
citations

71102

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h-index

56724

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129
all docs

129
docs citations

129
times ranked

7280
citing authors

#	ARTICLE	IF	CITATIONS
1	The integral use of aromatic plants: prefeasibility comparison of stand-alone and biorefinery processes using thyme (<i>Thymus vulgaris</i>) as base case. <i>Biomass Conversion and Biorefinery</i> , 2021, 11, 681-691.	4.6	4
2	Study of biorefineries based on experimental data: production of bioethanol, biogas, syngas, and electricity using coffee-cut stems as raw material. <i>Environmental Science and Pollution Research</i> , 2021, 28, 24590-24604.	5.3	19
3	Integral use of orange peel waste through the biorefinery concept: an experimental, technical, energy, and economic assessment. <i>Biomass Conversion and Biorefinery</i> , 2021, 11, 645-659.	4.6	54
4	Biorefinery potential of <i>Eucalyptus grandis</i> to produce phenolic compounds and biogas. <i>Canadian Journal of Forest Research</i> , 2021, 51, 89-100.	1.7	11
5	Thermochemical processing of woody biomass: A review focused on energy-driven applications and catalytic upgrading. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 136, 110376.	16.4	57
6	Cocaine degradation using a rotating biological disc reactor: Techno-economic and environmental analysis using experimental data. <i>Journal of Hazardous Materials</i> , 2021, 404, 124219.	12.4	0
7	Effect of the lignin extraction process on the economics of a woody-based biorefinery. <i>Computer Aided Chemical Engineering</i> , 2021, 50, 1871-1876.	0.5	2
8	Fermentative Production of Ethanol Using <i>Pinus patula</i> as Raw Material: Economic and Energy Assessment. <i>Waste and Biomass Valorization</i> , 2020, 11, 1777-1788.	3.4	3
9	Supercritical fluid extraction for enhancing polyphenolic compounds production from olive waste extracts. <i>Journal of Chemical Technology and Biotechnology</i> , 2020, 95, 356-362.	3.2	44
10	Techno-Economic and Environmental Analysis of Biogas Production from Plantain Pseudostem Waste in Colombia. <i>Waste and Biomass Valorization</i> , 2020, 11, 3161-3171.	3.4	17
11	Economic and social assessment of biorefineries: The case of Coffee Cut-Stems (CCS) in Colombia. <i>Bioresource Technology Reports</i> , 2020, 9, 100397.	2.7	22
12	Pre-feasibility analysis of the production of mucic acid from orange peel waste under the biorefinery concept. <i>Biochemical Engineering Journal</i> , 2020, 161, 107680.	3.6	33
13	Economic and Energy Valorization of Cassava Stalks as Feedstock for Ethanol and Electricity Production. <i>Bioenergy Research</i> , 2020, 13, 810-823.	3.9	3
14	Production and purification of xylitol by <i>Scheffersomyces amazonenses</i> via sugarcane hemicellulosic hydrolysate. <i>Biofuels, Bioproducts and Biorefining</i> , 2020, 14, 344-356.	3.7	21
15	Performance evaluation and economic analysis of the bioethanol and flour production using rejected unripe plantain fruits (<i>Musa paradisiaca</i> L.) as raw material. <i>Food and Bioproducts Processing</i> , 2020, 121, 29-42.	3.6	36
16	Comparison of furfural and biogas production using pentoses as platform. <i>Science of the Total Environment</i> , 2020, 728, 138841.	8.0	11
17	Sustainable Biorefineries: What was Learned from the Design, Analysis and Implementation. <i>Journal of Sustainable Development of Energy, Water and Environment Systems</i> , 2020, 8, 88-117.	1.9	23
18	Risk index to monitor an anaerobic digester using a dynamic model based on dilution rate, temperature, and pH. <i>Nonlinear Engineering</i> , 2019, 9, 35-50.	2.7	3

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19	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
20	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
21	Thermochemical, Biological, Biochemical, and Hybrid Conversion Methods of Bio-derived Molecules into Renewable Fuels. , 2019, , 59-81.		21
22	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
23	Analysis of the Coffee Cut Stems as Raw Material for the Production of Sugars for Acetone-Butanol-Ethanol (ABE) Fermentation: Techno-Economic Analysis. Waste and Biomass Valorization, 2019, 10, 3793-3808.	3.4	15
24	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
25	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
26	Extraction of phenolic compounds from spent blackberry pulp by enhanced-fluidity liquid extraction. AIChE Journal, 2019, 65, e16609.	3.6	3
27	Methods for designing and assessing biorefineries: Review. Biofuels, Bioproducts and Biorefining, 2019, 13, 789-808.	3.7	42
28	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
29	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
30	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
31	Techno-economic and environmental assessment of biogas production from banana peel (Musa) Tj ETQq1 1 0.784314 rgBT /Overlock 35971-35980.	5.3	38
32	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
33	Fermentation, thermochemical and catalytic processes in the transformation of biomass through efficient biorefineries. Catalysis Today, 2018, 302, 61-72.	4.4	58
34	Energy Efficiency of Biorefinery Schemes Using Sugarcane Bagasse as Raw Material. Energies, 2018, 11, 3474.	3.1	29
35	Potential raw materials for biorefineries to ensure food security: The Cocoyam case. Industrial Crops and Products, 2018, 126, 92-102.	5.2	36
36	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

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37	Analysis of Extraction Kinetics of Bioactive Compounds from Spent Coffee Grounds (<i>Coffea arabica</i>). Waste and Biomass Valorization, 2018, 9, 2381-2389.	3.4	24
38	Integral use of plants and their residues: the case of cocoyam (<i>Xanthosoma sagittifolium</i>) conversion through biorefineries at small scale. Environmental Science and Pollution Research, 2018, 25, 35949-35959.	5.3	6
39	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
40	Insights into the economic viability of cellulases recycling on bioethanol production from recycled paper sludge. Bioresource Technology, 2018, 267, 347-355.	9.6	29
41	Stoichiometric restrictions on operating modes in chemical technology. Chemical Engineering Science, 2018, 192, 642-654.	3.8	1
42	Stand-alone and biorefinery pathways to produce hydrogen through gasification and dark fermentation using <i>Pinus Patula</i> . Journal of Environmental Management, 2017, 203, 695-703.	7.8	40
43	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
44	A model biorefinery for avocado (<i>Persea americana</i> mill.) processing. Bioresource Technology, 2017, 243, 17-29.	9.6	56
45	Environmental assessment of hydrogen production based on <i>Pinus patula</i> plantations in Colombia. Energy, 2017, 139, 606-616.	8.8	16
46	A biorefinery for efficient processing and utilization of spent pulp of Colombian Andes Berry (<i>Rubus</i>) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Technology, 2017, 223, 227-236.	9.6	41
47	Modeling of bioethanol production in unconventional bioreactor assisted by electromagnetic field. International Journal of Energy Research, 2017, 41, 103-112.	4.5	2
48	The biorefinery concept for the industrial valorization of coffee processing by-products. , 2017, , 63-92.		20
49	A comprehensive review on the implementation of the biorefinery concept in biodiesel production plants. Biofuel Research Journal, 2017, 4, 691-703.	13.3	43
50	Análisis y caracterización de materiales amiláceos y celulósicos después de modificación enzimática. DYNA (Colombia), 2016, 83, 44.	0.4	8
51	Potential of the amazonian exotic fruit for biorefineries: The <i>Theobroma bicolor</i> (Makambo) case. Industrial Crops and Products, 2016, 86, 58-67.	5.2	9
52	Integrated Production of Different Types of Bioenergy from Oil Palm Through Biorefinery Concept. Waste and Biomass Valorization, 2016, 7, 737-745.	3.4	22
53	Effect of volumetric oxygen transfer coefficient ($k_L a$) on ethanol production performance by <i>Scheffersomyces stipitidis</i> on hemicellulosic sugarcane bagasse hydrolysate. Biochemical Engineering Journal, 2016, 112, 249-257.	3.6	20
54	Comparison of lignin extraction processes: Economic and environmental assessment. Bioresource Technology, 2016, 214, 468-476.	9.6	112

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55	Design strategies for sustainable biorefineries. <i>Biochemical Engineering Journal</i> , 2016, 116, 122-134.	3.6	205
56	Glycerol bioconversion in unconventional magnetically assisted bioreactor seeking whole cell biocatalyst (intracellular lipase) production. <i>Chemical Engineering Research and Design</i> , 2016, 111, 243-252.	5.6	9
57	Agricultural Waste Management Through Energy Producing Biorefineries: The Colombian Case. <i>Waste and Biomass Valorization</i> , 2016, 7, 789-798.	3.4	36
58	Wood residue (<i>Pinus patula</i> bark) as an alternative feedstock for producing ethanol and furfural in Colombia: experimental, techno-economic and environmental assessments. <i>Chemical Engineering Science</i> , 2016, 140, 309-318.	3.8	45
59	Techno-economic and environmental assessment of essential oil extraction from Oregano (<i>Origanum</i>) Tj ETQq1 1 0.784314 rgBT /Over 172-181.	9.3	59
60	Water uptake, chemical characterization, and tensile behavior of modified bananaâ€“plantain fiber and their polyester composites. <i>Polymer Composites</i> , 2016, 37, 2960-2973.	4.6	11
61	A biorefinery approach for the production of xylitol, ethanol and polyhydroxybutyrate from brewerâ€™s spent grain. <i>AIMS Agriculture and Food</i> , 2016, 1, 52-66.	1.6	37
62	Techno-Economic and Environmental Analysis of Ethanol Production from 10 Agroindustrial Residues in Colombia. <i>Energy & Fuels</i> , 2015, 29, 775-783.	5.1	46
63	Techno-economic and Environmental Assessment of p-Cymene and Pectin Production from Orange Peel. <i>Waste and Biomass Valorization</i> , 2015, 6, 253-261.	3.4	40
64	Design and analysis of a second and third generation biorefinery: The case of castorbean and microalgae. <i>Bioresource Technology</i> , 2015, 198, 836-843.	9.6	52
65	Optimization of the Colombian biodiesel supply chain from oil palm crop based on techno-economical and environmental criteria. <i>Energy Economics</i> , 2015, 47, 154-167.	12.1	26
66	Analysis of a biorefinery based on <i>Theobroma grandiflorum</i> (cocoazu) fruit. <i>Biomass Conversion and Biorefinery</i> , 2015, 5, 183-194.	4.6	6
67	Bifurcation analysis of dynamic process models using Aspen Dynamics® and Aspen Custom Modeler®. <i>Computers and Chemical Engineering</i> , 2014, 62, 10-20.	3.8	5
68	Economic and environmental assessment of syrup production. Colombian case. <i>Bioresource Technology</i> , 2014, 161, 84-90.	9.6	30
69	Techno-Economic Analysis of the Use of Fired Cogeneration Systems Based on Sugar Cane Bagasse in South Eastern and Mid-Western Regions of Mexico. <i>Waste and Biomass Valorization</i> , 2014, 5, 189-198.	3.4	32
70	Techno-economic and environmental assessment of essential oil extraction from Citronella (<i>Cymbopogon winteriana</i>) and Lemongrass (<i>Cymbopogon citratus</i>): A Colombian case to evaluate different extraction technologies. <i>Industrial Crops and Products</i> , 2014, 54, 175-184.	5.2	39
71	Process synthesis for antioxidant polyphenolic compounds production from <i>Matisia cordata</i> Bonpl. (zapote) pulp. <i>Journal of Food Engineering</i> , 2014, 134, 5-15.	5.2	15
72	Comparison of feedstocks and technologies for biodiesel production: An environmental and techno-economic evaluation. <i>Renewable Energy</i> , 2014, 69, 479-487.	8.9	90

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73	Optimization of esterification and transesterification of esters based on experiment planning. <i>Theoretical Foundations of Chemical Engineering</i> , 2014, 48, 104-112.	0.7	0
74	Cementitious Materials Reinforcement Using <i>Angustifolia kunth</i> Bamboo Fiber Covered with Nanostructured Manganese Oxide. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 8452-8463.	3.7	8
75	Analysis of potential technological schemes for the development of oil palm industry in Colombia: A biorefinery point of view. <i>Industrial Crops and Products</i> , 2014, 52, 457-465.	5.2	24
76	The Colombian biofuel supply chains: The assessment of current and promising scenarios based on environmental goals. <i>Energy Policy</i> , 2014, 67, 232-242.	8.8	20
77	Techno-economic and environmental assessment of an olive stone based biorefinery. <i>Resources, Conservation and Recycling</i> , 2014, 92, 145-150.	10.8	84
78	Use of residual banana for polyhydroxybutyrate (PHB) production: Case of study in an integrated biorefinery. <i>Waste Management</i> , 2014, 34, 2634-2640.	7.4	57
79	Integrating first, second, and third generation biorefineries: Incorporating microalgae into the sugarcane biorefinery. <i>Chemical Engineering Science</i> , 2014, 118, 126-140.	3.8	143
80	Analysis of technological schemes for the efficient production of added-value products from Colombian oleochemical feedstocks. <i>Process Biochemistry</i> , 2014, 49, 474-489.	3.7	9
81	Evolution from biofuels to integrated biorefineries: techno-economic and environmental assessment of oil palm in Colombia. <i>Journal of Cleaner Production</i> , 2014, 81, 51-59.	9.3	41
82	Efecto del cambio en el uso de la tierra en la obtención de palma aceitera para la producción de biodiesel en Colombia. <i>Ingeniería Y Universidad</i> , 2014, 18, .	0.5	0
83	Analysis and Design of Extractive Fermentation Processes Using a Novel Short-Cut Method. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 12915-12926.	3.7	11
84	Techno-economic analysis for brewer's spent grains use on a biorefinery concept: The Brazilian case. <i>Bioresource Technology</i> , 2013, 148, 302-310.	9.6	100
85	Design and economic analysis of the technological scheme for 1,3-propanediol production from raw glycerol. <i>Theoretical Foundations of Chemical Engineering</i> , 2013, 47, 239-253.	0.7	5
86	Solubility of some phenolic acids contained in citrus seeds in supercritical carbon dioxide: Comparison of mixing rules, influence of multicomponent mixture and model validation. <i>Theoretical Foundations of Chemical Engineering</i> , 2013, 47, 381-387.	0.7	6
87	Production of Bioethanol Using <i>Chlorella vulgaris</i> Cake: A Technoeconomic and Environmental Assessment in the Colombian Context. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 16786-16794.	3.7	22
88	Valorization of glycerol through the production of biopolymers: The PHB case using <i>Bacillus megaterium</i> . <i>Bioresource Technology</i> , 2013, 133, 38-44.	9.6	93
89	Techno-economic analysis for a sugarcane biorefinery: Colombian case. <i>Bioresource Technology</i> , 2013, 135, 533-543.	9.6	130
90	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. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 4132-4145.	3.7	52

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91	Techno-economic analysis of bioethanol production from lignocellulosic residues in Colombia: A process simulation approach. <i>Bioresource Technology</i> , 2013, 139, 300-307.	9.6	153
92	Growth and Oil Extraction from <i>Chlorella vulgaris</i> : A Techno-Economic and Environmental Assessment. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 10503-10508.	3.7	16
93	Propionic Acid Production from Raw Glycerol Using Commercial and Engineered Strains. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 2354-2361.	3.7	17
94	Techno-economic analysis of bioethanol production in Africa: Tanzania case. <i>Energy</i> , 2012, 48, 442-454.	8.8	22
95	Biosynthesis of PHB from a new isolated <i>Bacillus megaterium</i> strain: Outlook on future developments with endospore forming bacteria. <i>Biotechnology and Bioprocess Engineering</i> , 2012, 17, 250-258.	2.6	68
96	Social and techno-economical analysis of biodiesel production in Peru. <i>Energy Policy</i> , 2012, 43, 427-435.	8.8	43
97	Conceptual design of cost-effective and environmentally-friendly configurations for fuel ethanol production from sugarcane by knowledge-based process synthesis. <i>Bioresource Technology</i> , 2012, 104, 305-314.	9.6	48
98	Design and analysis of biorefineries based on raw glycerol: Addressing the glycerol problem. <i>Bioresource Technology</i> , 2012, 111, 282-293.	9.6	119
99	Design and analysis of antioxidant compounds from Andes Berry fruits (<i>Rubus glaucus</i> Benth) using an enhanced-fluidity liquid extraction process with CO ₂ and ethanol. <i>Journal of Supercritical Fluids</i> , 2012, 62, 96-101.	3.2	25
100	Analysis of the Production Process of Optically Pure d-Lactic Acid from Raw Glycerol Using Engineered <i>Escherichia coli</i> Strains. <i>Applied Biochemistry and Biotechnology</i> , 2012, 166, 680-699.	2.9	26
101	Process Simulation of Fuel Ethanol Production from Lignocellulosics using Aspen Plus. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 6205-6212.	3.7	60
102	Production of Bioethanol from Agroindustrial Residues as Feedstocks. , 2011, , 251-285.		31
103	Empty fruit bunches from oil palm as a potential raw material for fuel ethanol production. <i>Biomass and Bioenergy</i> , 2011, 35, 1130-1137.	5.7	121
104	Analysis of coffee cut-stems (CCS) as raw material for fuel ethanol production. <i>Energy</i> , 2011, 36, 4182-4190.	8.8	31
105	Importance of stability study of continuous systems for ethanol production. <i>Journal of Biotechnology</i> , 2011, 151, 43-55.	3.8	41
106	Design and analysis of poly-3-hydroxybutyrate production processes from crude glycerol. <i>Process Biochemistry</i> , 2011, 46, 310-317.	3.7	98
107	Optimization on the Use of Crude Glycerol from the Biodiesel Production to Obtain Poly-3-Hydroxybutyrate. , 2011, , .		5
108	Degrees of freedom analysis for a distillation column. <i>Theoretical Foundations of Chemical Engineering</i> , 2010, 44, 686-697.	0.7	4

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109	Comparison of acid sulfonic mesostructured silicas for 1-butylacetate synthesis. <i>Materials Chemistry and Physics</i> , 2010, 121, 215-222.	4.0	16
110	Novel chitosan membranes as support for lipases immobilization: Characterization aspects. <i>Carbohydrate Polymers</i> , 2010, 79, 9-16.	10.2	96
111	Design and analysis of fuel ethanol production from raw glycerol. <i>Energy</i> , 2010, 35, 5286-5293.	8.8	44
112	Experimental measurements of vapor-liquid equilibria at low pressure: Systems containing alcohols, esters and organic acids. <i>Fluid Phase Equilibria</i> , 2010, 287, 141-145.	2.5	15
113	Thermodynamic consistency of experimental VLE data for asymmetric binary mixtures at high pressures. <i>Fluid Phase Equilibria</i> , 2010, 293, 1-10.	2.5	13
114	Parameters estimation and VLE calculation in asymmetric binary mixtures containing carbon dioxide+n-alkanols. <i>Fluid Phase Equilibria</i> , 2009, 275, 1-7.	2.5	37
115	CO-gasification of pelletized wood residues. <i>Fuel</i> , 2009, 88, 437-445.	6.4	48
116	Process integration possibilities for biodiesel production from palm oil using ethanol obtained from lignocellulosic residues of oil palm industry. <i>Bioresource Technology</i> , 2009, 100, 1227-1237.	9.6	109
117	Ethanol Dehydration by Adsorption with Starchy and Cellulosic Materials. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 6783-6788.	3.7	35
118	Fuel ethanol production from sugarcane and corn: Comparative analysis for a Colombian case. <i>Energy</i> , 2008, 33, 385-399.	8.8	262
119	Trends in biotechnological production of fuel ethanol from different feedstocks. <i>Bioresource Technology</i> , 2008, 99, 5270-5295.	9.6	1,450
120	Influence of Fluid Concentration on the Elevation of Boiling Point of Blackberry Juice. <i>International Journal of Food Properties</i> , 2008, 11, 865-875.	3.0	6
121	Fuel ethanol production: Process design trends and integration opportunities. <i>Bioresource Technology</i> , 2007, 98, 2415-2457.	9.6	818
122	Phase equilibrium calculations for carbon dioxide+n-alkanes binary mixtures with the Wong-Sandler mixing rules. <i>Fluid Phase Equilibria</i> , 2006, 239, 206-212.	2.5	25
123	Energy consumption analysis of integrated flowsheets for production of fuel ethanol from lignocellulosic biomass. <i>Energy</i> , 2006, 31, 2447-2459.	8.8	205
124	Objective functions analysis in the minimization of binary VLE data for asymmetric mixtures at high pressures. <i>Fluid Phase Equilibria</i> , 2006, 248, 147-157.	2.5	17
125	Analysis of the environmental impact of butylacetate process through the WAR algorithm. <i>Chemical Engineering Science</i> , 2004, 59, 5839-5845.	3.8	45
126	New Perspectives in C1-4 Acetates Production Using Reactive Distillation: Acetic Acid or Acetic Anhydride as Raw Materials. <i>Chemie-Ingenieur-Technik</i> , 2001, 73, 623-623.	0.8	1