

Mercedes Ballesteros

List of Publications by Year in descending order

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117
papers

11,076
citations

31902

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117
all docs

117
docs citations

117
times ranked

9448
citing authors

#	ARTICLE	IF	CITATIONS
1	Pretreatment technologies for an efficient bioethanol production process based on enzymatic hydrolysis: A review. <i>Bioresource Technology</i> , 2010, 101, 4851-4861.	4.8	3,203
2	Ethanol from lignocellulosic materials by a simultaneous saccharification and fermentation process (SFS) with <i>Kluyveromyces marxianus</i> CECT 10875. <i>Process Biochemistry</i> , 2004, 39, 1843-1848.	1.8	434
3	Ethanol Production From Steam-Explosion Pretreated Wheat Straw. <i>Applied Biochemistry and Biotechnology</i> , 2006, 130, 496-508.	1.4	260
4	Optimizing Liquid Hot Water pretreatment conditions to enhance sugar recovery from wheat straw for fuel-ethanol production. <i>Fuel</i> , 2008, 87, 3640-3647.	3.4	236
5	Comparison of SHF and SSF processes from steam-exploded wheat straw for ethanol production by xylose-fermenting and robust glucose-fermenting <i>Saccharomyces cerevisiae</i> strains. <i>Biotechnology and Bioengineering</i> , 2008, 100, 1122-1131.	1.7	204
6	Production of fuel ethanol from steam-explosion pretreated olive tree pruning. <i>Fuel</i> , 2008, 87, 692-700.	3.4	203
7	Evaluation of steam explosion pre-treatment for enzymatic hydrolysis of sunflower stalks. <i>Enzyme and Microbial Technology</i> , 2008, 42, 160-166.	1.6	181
8	Linking microalgae and cyanobacteria culture conditions and key-enzymes for carbohydrate accumulation. <i>Biotechnology Advances</i> , 2012, 30, 1655-1661.	6.0	159
9	Extrusion as a pretreatment for lignocellulosic biomass: Fundamentals and applications. <i>Renewable Energy</i> , 2017, 114, 1427-1441.	4.3	154
10	Hydrothermal Pretreatment Conditions to Enhance Ethanol Production from Poplar Biomass. <i>Applied Biochemistry and Biotechnology</i> , 2003, 105, 87-100.	1.4	152
11	A review of biological delignification and detoxification methods for lignocellulosic bioethanol production. <i>Critical Reviews in Biotechnology</i> , 2015, 35, 342-354.	5.1	151
12	Changes in various physical/chemical parameters of <i>Pinus pinaster</i> wood after steam explosion pretreatment. <i>Biomass and Bioenergy</i> , 2003, 25, 301-308.	2.9	150
13	Effect of Inhibitors Released During Steam-Explosion Pretreatment of Barley Straw on Enzymatic Hydrolysis. <i>Applied Biochemistry and Biotechnology</i> , 2006, 129, 278-288.	1.4	142
14	Enzymatic cell disruption of microalgae biomass in biorefinery processes. <i>Biotechnology and Bioengineering</i> , 2015, 112, 1955-1966.	1.7	142
15	Enzymic hydrolysis of steam exploded herbaceous agricultural waste (<i>Brassica carinata</i>) at different particule sizes. <i>Process Biochemistry</i> , 2002, 38, 187-192.	1.8	138
16	Enhancing methane production of <i>Chlorella vulgaris</i> via thermochemical pretreatments. <i>Bioresource Technology</i> , 2013, 149, 136-141.	4.8	137
17	Acclimation to extremely high ammonia levels in continuous biomethanation process and the associated microbial community dynamics. <i>Bioresource Technology</i> , 2018, 247, 616-623.	4.8	133
18	Microalgae autoflocculation: an alternative to high-energy consuming harvesting methods. <i>Journal of Applied Phycology</i> , 2013, 25, 991-999.	1.5	128

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19	Biotechnological advances in lactic acid production by lactic acid bacteria: lignocellulose as novel substrate. <i>Biofuels, Bioproducts and Biorefining</i> , 2018, 12, 290-303.	1.9	124
20	Algicidal microorganisms and secreted algicides: New tools to induce microalgal cell disruption. <i>Biotechnology Advances</i> , 2015, 33, 1615-1625.	6.0	119
21	Effect of Lignocellulosic Degradation Compounds from Steam Explosion Pretreatment on Ethanol Fermentation by Thermotolerant Yeast <i>Kluyveromyces marxianus</i> . <i>Applied Biochemistry and Biotechnology</i> , 2003, 105, 141-154.	1.4	118
22	Effect of endoxylanase and β -l-arabinofuranosidase supplementation on the enzymatic hydrolysis of steam exploded wheat straw. <i>Bioresource Technology</i> , 2011, 102, 4552-4558.	4.8	112
23	Bioethanol production from wheat straw by the thermotolerant yeast <i>Kluyveromyces marxianus</i> CECT 10875 in a simultaneous saccharification and fermentation fed-batch process. <i>Fuel</i> , 2009, 88, 2142-2147.	3.4	110
24	Effect of high pressure thermal pretreatment on <i>Chlorella vulgaris</i> biomass: Organic matter solubilisation and biochemical methane potential. <i>Fuel</i> , 2014, 117, 674-679.	3.4	109
25	Enhanced methane production of <i>Chlorella vulgaris</i> and <i>Chlamydomonas reinhardtii</i> by hydrolytic enzymes addition. <i>Energy Conversion and Management</i> , 2014, 85, 551-557.	4.4	106
26	From piggery wastewater nutrients to biogas: Microalgae biomass revalorization through anaerobic digestion. <i>Renewable Energy</i> , 2016, 96, 1103-1110.	4.3	104
27	The potential of agricultural banana waste for bioethanol production. <i>Fuel</i> , 2018, 213, 176-185.	3.4	99
28	Algalculture integration in conventional wastewater treatment plants: Anaerobic digestion comparison of primary and secondary sludge with microalgae biomass. <i>Bioresource Technology</i> , 2015, 184, 236-244.	4.8	94
29	Different laccase detoxification strategies for ethanol production from lignocellulosic biomass by the thermotolerant yeast <i>Kluyveromyces marxianus</i> CECT 10875. <i>Bioresource Technology</i> , 2012, 106, 101-109.	4.8	89
30	Second-generation ethanol production from steam exploded barley straw by <i>Kluyveromyces marxianus</i> CECT 10875. <i>Fuel</i> , 2011, 90, 1624-1630.	3.4	88
31	Selection of thermotolerant yeasts for simultaneous saccharification and fermentation (SSF) of cellulose to ethanol. <i>Applied Biochemistry and Biotechnology</i> , 1991, 28-29, 307-315.	1.4	84
32	Ammonia tolerant inocula provide a good base for anaerobic digestion of microalgae in third generation biogas process. <i>Bioresource Technology</i> , 2017, 225, 272-278.	4.8	84
33	Dilute sulfuric acid pretreatment of cardoon for ethanol production. <i>Biochemical Engineering Journal</i> , 2008, 42, 84-91.	1.8	77
34	Effect of water extraction on sugars recovery from steam exploded olive tree pruning. <i>Bioresource Technology</i> , 2011, 102, 6611-6616.	4.8	77
35	Optimization of uncatalyzed steam explosion pretreatment of rapeseed straw for biofuel production. <i>Bioresource Technology</i> , 2015, 190, 97-105.	4.8	77
36	Different process configurations for bioethanol production from pretreated olive pruning biomass. <i>Journal of Chemical Technology and Biotechnology</i> , 2011, 86, 881-887.	1.6	74

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37	Protease pretreated <i>Chlorella vulgaris</i> biomass bioconversion to methane via semi-continuous anaerobic digestion. <i>Fuel</i> , 2015, 158, 35-41.	3.4	73
38	Processing of extracted olive oil pomace residue by hydrothermal or dilute acid pretreatment and enzymatic hydrolysis in a biorefinery context. <i>Renewable Energy</i> , 2020, 145, 1235-1245.	4.3	73
39	Adaptation of the xylose fermenting yeast <i>Saccharomyces cerevisiae</i> F12 for improving ethanol production in different fed-batch SSF processes. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2010, 37, 1211-1220.	1.4	70
40	A new lignocellulosic biomass deconstruction process combining thermo-mechano chemical action and bio-catalytic enzymatic hydrolysis in a twin-screw extruder. <i>Industrial Crops and Products</i> , 2014, 55, 258-266.	2.5	69
41	Ethanol production from glucose and xylose obtained from steam exploded water-extracted olive tree pruning using phosphoric acid as catalyst. <i>Bioresource Technology</i> , 2014, 153, 101-107.	4.8	68
42	Title is missing!. <i>World Journal of Microbiology and Biotechnology</i> , 2002, 18, 559-561.	1.7	67
43	Residual biomass potential in olive tree cultivation and olive oil industry in Spain: valorization proposal in a biorefinery context. <i>Spanish Journal of Agricultural Research</i> , 2017, 15, e0206.	0.3	65
44	Second generation bioethanol from steam exploded <i>Eucalyptus globulus</i> wood. <i>Fuel</i> , 2013, 111, 66-74.	3.4	64
45	Autohydrolysis and alkaline pretreatment effect on <i>Chlorella vulgaris</i> and <i>Scenedesmus</i> sp. methane production. <i>Energy</i> , 2014, 78, 48-52.	4.5	63
46	Enzymatic pretreatment of <i>Chlorella vulgaris</i> for biogas production: Influence of urban wastewater as a sole nutrient source on macromolecular profile and biocatalyst efficiency. <i>Bioresource Technology</i> , 2016, 199, 319-325.	4.8	63
47	Pretreatment Technologies for Lignocellulose-to-Bioethanol Conversion. , 2011, , 149-176.		61
48	Improving the fermentation performance of <i>Saccharomyces cerevisiae</i> by laccase during ethanol production from steam-exploded wheat straw at high substrate loadings. <i>Biotechnology Progress</i> , 2013, 29, 74-82.	1.3	61
49	Comparing cell viability and ethanol fermentation of the thermotolerant yeast <i>Kluyveromyces marxianus</i> and <i>Saccharomyces cerevisiae</i> on steam-exploded biomass treated with laccase. <i>Bioresource Technology</i> , 2013, 135, 239-245.	4.8	61
50	Ethanol Production From Pretreated Olive Tree Wood and Sunflower Stalks by an SSF Process. <i>Applied Biochemistry and Biotechnology</i> , 2006, 130, 631-643.	1.4	59
51	Evaluating Lignin-Rich Residues from Biochemical Ethanol Production of Wheat Straw and Olive Tree Pruning by FTIR and 2D-NMR. <i>International Journal of Polymer Science</i> , 2015, 2015, 1-11.	1.2	58
52	Valorization of steam-exploded wheat straw through a biorefinery approach: Bioethanol and bio-oil co-production. <i>Fuel</i> , 2017, 199, 403-412.	3.4	58
53	Ethanol Production from Lignocellulosic Byproducts of Olive Oil Extraction. <i>Applied Biochemistry and Biotechnology</i> , 2001, 91-93, 237-252.	1.4	56
54	Effects of acetic acid, furfural and catechol combinations on ethanol fermentation of <i>Kluyveromyces marxianus</i> . <i>Process Biochemistry</i> , 2006, 41, 1223-1228.	1.8	56

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55	Effect of different cellulase dosages on cell viability and ethanol production by <i>Kluyveromyces marxianus</i> in SSF processes. <i>Bioresource Technology</i> , 2009, 100, 890-895.	4.8	56
56	Ethanol Production from the Organic Fraction Obtained After Thermal Pretreatment of Municipal Solid Waste. <i>Applied Biochemistry and Biotechnology</i> , 2010, 161, 423-431.	1.4	55
57	Sugar production from wheat straw biomass by alkaline extrusion and enzymatic hydrolysis. <i>Renewable Energy</i> , 2016, 86, 1060-1068.	4.3	55
58	Efficient Anaerobic Digestion of Microalgae Biomass: Proteins as a Key Macromolecule. <i>Molecules</i> , 2018, 23, 1098.	1.7	55
59	Xylanase contribution to the efficiency of cellulose enzymatic hydrolysis of barley straw. <i>Applied Biochemistry and Biotechnology</i> , 2007, 137-140, 353-365.	1.4	54
60	Methane production of thermally pretreated <i>Chlorella vulgaris</i> and <i>Scenedesmus</i> sp. biomass at increasing biomass loads. <i>Applied Energy</i> , 2014, 129, 238-242.	5.1	52
61	Effect of Binary Combinations of Selected Toxic Compounds on Growth and Fermentation of <i>Kluyveromyces marxianus</i> . <i>Biotechnology Progress</i> , 2004, 20, 715-720.	1.3	49
62	Optimization of integrated alkaline extrusion pretreatment of barley straw for sugar production by enzymatic hydrolysis. <i>Process Biochemistry</i> , 2013, 48, 775-781.	1.8	49
63	<i>Chlorella vulgaris</i> vs cyanobacterial biomasses: Comparison in terms of biomass productivity and biogas yield. <i>Energy Conversion and Management</i> , 2015, 92, 137-142.	4.4	48
64	Sugar production from barley straw biomass pretreated by combined alkali and enzymatic extrusion. <i>Bioresource Technology</i> , 2014, 158, 262-268.	4.8	47
65	Unraveling the effects of laccase treatment on enzymatic hydrolysis of steam-exploded wheat straw. <i>Bioresource Technology</i> , 2015, 175, 209-215.	4.8	47
66	Steam Explosion as Lignocellulosic Biomass Pretreatment. , 2016, , 349-368.		47
67	Biochemical methane potential of microalgae biomass using different microbial inocula. <i>Biotechnology for Biofuels</i> , 2018, 11, 184.	6.2	46
68	Ethanol Production from Olive Oil Extraction Residue Pretreated with Hot Water. <i>Applied Biochemistry and Biotechnology</i> , 2002, 98-100, 717-732.	1.4	43
69	In situ laccase treatment enhances the fermentability of steam-exploded wheat straw in SSCF processes at high dry matter consistencies. <i>Bioresource Technology</i> , 2013, 143, 337-343.	4.8	43
70	Protease cell wall degradation of <i>Chlorella vulgaris</i> : Effect on methane production. <i>Bioresource Technology</i> , 2014, 171, 421-427.	4.8	43
71	High-solids content enzymatic hydrolysis of hydrothermally pretreated sugarcane bagasse using a laboratory-made enzyme blend and commercial preparations. <i>Process Biochemistry</i> , 2016, 51, 1561-1567.	1.8	42
72	Influence of enzymatic hydrolysis on the biochemical methane potential of <i>Chlorella vulgaris</i> and <i>Scenedesmus</i> sp.. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 1299-1305.	1.6	41

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73	Microbial communities of biomethanization digesters fed with raw and heat pre-treated microalgae biomasses. <i>Chemosphere</i> , 2017, 168, 1013-1021.	4.2	41
74	Impact of temperature and photoperiod on anaerobic biodegradability of microalgae grown in urban wastewater. <i>International Biodeterioration and Biodegradation</i> , 2016, 106, 16-23.	1.9	40
75	Phenols and lignin: Key players in reducing enzymatic hydrolysis yields of steam-pretreated biomass in presence of laccase. <i>Journal of Biotechnology</i> , 2016, 218, 94-101.	1.9	40
76	Inulin-Containing Biomass for Ethanol Production <i>Carbohydrate Extraction and Ethanol Fermentation</i>. <i>Applied Biochemistry and Biotechnology</i> , 2006, 132, 922-932.	1.4	39
77	Optimal conditions of acid-catalysed steam explosion pretreatment of banana lignocellulosic biomass for fermentable sugar production. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 2351-2359.	1.6	39
78	Optimization of the simultaneous saccharification and fermentation process using thermotolerant yeasts. <i>Applied Biochemistry and Biotechnology</i> , 1993, 39-40, 201-211.	1.4	36
79	A Bacterial Laccase for Enhancing Saccharification and Ethanol Fermentation of Steam-Pretreated Biomass. <i>Fermentation</i> , 2016, 2, 11.	1.4	36
80	Biogas from Anaerobic Digestion as an Energy Vector: Current Upgrading Development. <i>Energies</i> , 2021, 14, 2742.	1.6	36
81	Ethanol from laccase-detoxified lignocellulose by the thermotolerant yeast <i>Kluyveromyces marxianus</i> —Effects of steam pretreatment conditions, process configurations and substrate loadings. <i>Biochemical Engineering Journal</i> , 2013, 79, 94-103.	1.8	34
82	Purification and characterization of a GH43 β -xylosidase from <i>Enterobacter</i> sp. identified and cloned from forest soil bacteria. <i>Microbiological Research</i> , 2014, 169, 213-220.	2.5	34
83	Exploring laccase and mediators behavior during saccharification and fermentation of steam-exploded wheat straw for bioethanol production. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 1816-1825.	1.6	32
84	Alkaline twin-screw extrusion fractionation of olive-tree pruning biomass. <i>Industrial Crops and Products</i> , 2015, 74, 336-341.	2.5	31
85	Biomethane production using fresh and thermally pretreated <i>Chlorella vulgaris</i> biomass: A comparison of batch and semi-continuous feeding mode. <i>Ecological Engineering</i> , 2015, 84, 273-277.	1.6	31
86	Integrated production of second generation ethanol and lactic acid from steam-exploded elephant grass. <i>Bioresource Technology</i> , 2018, 249, 1017-1024.	4.8	31
87	Study of process configuration and catalyst concentration in integrated alkaline extrusion of barley straw for bioethanol production. <i>Fuel</i> , 2014, 134, 448-454.	3.4	30
88	Biological conversion of forage sorghum biomass to ethanol by steam explosion pretreatment and simultaneous hydrolysis and fermentation at high solid content. <i>Biomass Conversion and Biorefinery</i> , 2012, 2, 123-132.	2.9	28
89	Fed-batch SSCF using steam-exploded wheat straw at high dry matter consistencies and a xylose-fermenting <i>Saccharomyces cerevisiae</i> strain: effect of laccase supplementation. <i>Biotechnology for Biofuels</i> , 2013, 6, 160.	6.2	28
90	Inhibition of cellulose enzymatic hydrolysis by laccase-derived compounds from phenols. <i>Biotechnology Progress</i> , 2015, 31, 700-706.	1.3	28

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91	Comparison of <i>Chlorella vulgaris</i> and cyanobacterial biomass: cultivation in urban wastewater and methane production. <i>Bioprocess and Biosystems Engineering</i> , 2016, 39, 703-712.	1.7	26
92	Designing an olive tree pruning biorefinery for the production of bioethanol, xylitol and antioxidants: a techno-economic assessment. <i>Holzforschung</i> , 2018, 73, 15-23.	0.9	25
93	<i>Lactobacillus pentosus</i> CECT 4023 T co-utilizes glucose and xylose to produce lactic acid from wheat straw hydrolysate: Anaerobiosis as a key factor. <i>Biotechnology Progress</i> , 2019, 35, e2739.	1.3	23
94	Strategies of xylanase supplementation for an efficient saccharification and cofermentation process from pretreated wheat straw. <i>Biotechnology Progress</i> , 2011, 27, 944-950.	1.3	21
95	Production and hydrolytic efficiency of enzymes from <i>Trichoderma reesei</i> RUTC30 using steam pretreated wheat straw as carbon source. <i>Journal of Chemical Technology and Biotechnology</i> , 2013, 88, 1150-1156.	1.6	20
96	Enzymatic hydrolysis from carbohydrates of barley straw pretreated by ionic liquids. <i>Journal of Chemical Technology and Biotechnology</i> , 2013, 88, 937-941.	1.6	20
97	Insoluble solids at high concentrations repress yeast's response against stress and increase intracellular ROS levels. <i>Scientific Reports</i> , 2019, 9, 12236.	1.6	20
98	Study of the Application of Alkaline Extrusion to the Pretreatment of Eucalyptus Biomass as First Step in a Bioethanol Production Process. <i>Energies</i> , 2018, 11, 2961.	1.6	19
99	Volatile fatty acids production from protease pretreated <i>Chlorella</i> biomass via anaerobic digestion. <i>Biotechnology Progress</i> , 2018, 34, 1363-1369.	1.3	19
100	Effect of nutrient addition on preinoculum growth of <i>S. cerevisiae</i> for application in SSF processes. <i>Biomass and Bioenergy</i> , 2012, 45, 168-174.	2.9	18
101	The biorefinery concept for the industrial valorization of residues from olive oil industry. , 2017, , 57-78.		17
102	Determination of the Lignocellulosic Components of Olive Tree Pruning Biomass by Near Infrared Spectroscopy. <i>Energies</i> , 2019, 12, 2497.	1.6	16
103	Bioprocessing of rice husk into monosaccharides and the fermentative production of bioethanol and lactate. <i>Cellulose</i> , 2019, 26, 7309-7322.	2.4	16
104	Fractionation of <i>Cynara cardunculus</i> (cardoon) biomass by dilute-acid pretreatment. <i>Applied Biochemistry and Biotechnology</i> , 2007, 137-140, 239-252.	1.4	14
105	Application of a microassay method to study enzymatic hydrolysis of pretreated wheat straw. <i>Journal of Chemical Technology and Biotechnology</i> , 2010, 85, 1291-1297.	1.6	14
106	Cellulase production using different streams of wheat grain- and wheat straw-based ethanol processes. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2011, 38, 791-802.	1.4	14
107	Enzyme hydrolysis of cassava peels: treatment by amylolytic and cellulolytic enzymes. <i>Biocatalysis and Biotransformation</i> , 2019, 37, 77-85.	1.1	14
108	Effects of Temperature on Steam Explosion Pretreatment of Poplar Hybrids with Different Lignin Contents in Bioethanol Production. <i>International Journal of Green Energy</i> , 2015, 12, 832-842.	2.1	13

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109	Enzymatic hydrolysis of lignocellulosic biomass. , 2010, , 159-177.		12
110	Effect of media supplementation on ethanol production by simultaneous saccharification and fermentation process. Applied Biochemistry and Biotechnology, 1994, 45-46, 283-294.	1.4	11
111	Progress on Enzymatic Saccharification Technologies for Biofuels Production. , 2013, , 145-169.		11
112	Starch Biomass for Biofuels, Biomaterials, and Chemicals. , 2018, , 69-94.		8
113	Effect of microalgae storage conditions on methane yields. Environmental Science and Pollution Research, 2018, 25, 14263-14270.	2.7	6
114	Biogas and Volatile Fatty Acids Production: Temperature as a Determining Factor in the Anaerobic Digestion of Spirulina platensis. Waste and Biomass Valorization, 2019, 10, 2507-2515.	1.8	6
115	Optimisation of Uncatalysed Steam Explosion of Lignocellulosic Biomasses to Obtain Both C6- and C5-Sugars. Waste and Biomass Valorization, 2020, 11, 231-244.	1.8	6
116	Simultaneous saccharification and fermentation process for converting the cellulosic fraction of olive oil extraction residue into ethanol.. Grasas Y Aceites, 2002, 53, .	0.3	4
117	Hydrothermal Processing of Microalgae. , 2017, , 483-500.		0