Helene Carrere

List of Publications by Year
in descending order

126 papers	11,914 citations	28190 55 h-index	26548 107 g-index
130 all docs	130 docs citations	130 times ranked	8938 citing authors

#	Article	IF	Citations
1	Pretreatment methods to improve sludge anaerobic degradability: A review. Journal of Hazardous Materials, 2010, 183, 1-15.	6.5	950
2	Hydrogen production from agricultural waste by dark fermentation: A review. International Journal of Hydrogen Energy, 2010, 35, 10660-10673.	3.8	679
3	Effect of ultrasonic, thermal and ozone pre-treatments on waste activated sludge solubilisation and anaerobic biodegradability. Chemical Engineering and Processing: Process Intensification, 2006, 45, 711-718.	1.8	500
4	Effects of thermal treatments on five different waste activated sludge samples solubilisation, physical properties and anaerobic digestion. Chemical Engineering Journal, 2008, 139, 236-244.	6.6	475
5	Review of feedstock pretreatment strategies for improved anaerobic digestion: From lab-scale research to full-scale application. Bioresource Technology, 2016, 199, 386-397.	4.8	441
6	Solubilisation of waste-activated sludge by ultrasonic treatment. Chemical Engineering Journal, 2005, 106, 163-169.	6.6	383
7	New opportunities for agricultural digestate valorization: current situation and perspectives. Energy and Environmental Science, 2015, 8, 2600-2621.	15.6	373
8	Do furanic and phenolic compounds of lignocellulosic and algae biomass hydrolyzate inhibit anaerobic mixed cultures? A comprehensive review. Biotechnology Advances, 2014, 32, 934-951.	6.0	363
9	Lignocellulosic Materials Into Biohydrogen and Biomethane: Impact of Structural Features and Pretreatment. Critical Reviews in Environmental Science and Technology, 2013, 43, 260-322.	6.6	318
10	Production of bioethanol, methane and heat from sugarcane bagasse in a biorefinery concept. Bioresource Technology, 2011, 102, 7887-7895.	4.8	308
11	Pretreatment of microalgae to improve biogas production: A review. Bioresource Technology, 2014, 172, 403-412.	4.8	290
12	Thermal, chemical and thermo-chemical pre-treatment of waste activated sludge for anaerobic digestion. Journal of Chemical Technology and Biotechnology, 2004, 79, 1197-1203.	1.6	277
13	Recent and Emerging Applications of Membrane Processes in the Food and Dairy Industry. Food and Bioproducts Processing, 2001, 79, 89-102.	1.8	253
14	Impacts of thermal pre-treatments on the semi-continuous anaerobic digestion of waste activated sludge. Biochemical Engineering Journal, 2007, 34, 20-27.	1.8	244
15	Comparison of seven types of thermo-chemical pretreatments on the structural features and anaerobic digestion of sunflower stalks. Bioresource Technology, 2012, 120, 241-247.	4.8	238
16	Pretreatment of food waste for methane and hydrogen recovery: A review. Bioresource Technology, 2018, 249, 1025-1039.	4.8	232
17	Improvement of anaerobic degradation by white-rot fungi pretreatment of lignocellulosic biomass: A review. Renewable and Sustainable Energy Reviews, 2016, 59, 179-198.	8.2	219
18	Effect of lignin-derived and furan compounds found in lignocellulosic hydrolysates on biomethane production. Bioresource Technology, 2012, 104, 90-99.	4.8	198

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19	A comparison of different pre-treatments to increase methane production from two agricultural substrates. Applied Energy, 2013, 104, 62-70.	5.1	191
20	Predictive Models of Biohydrogen and Biomethane Production Based on the Compositional and Structural Features of Lignocellulosic Materials. Environmental Science & Technology, 2012, 46, 12217-12225.	4.6	176
21	Inhibition of fermentative hydrogen production by lignocellulose-derived compounds in mixed cultures. International Journal of Hydrogen Energy, 2012, 37, 3150-3159.	3.8	167
22	Estimating anaerobic biodegradability indicators for waste activated sludge. Chemical Engineering Journal, 2010, 160, 488-496.	6.6	138
23	French Brittany macroalgae screening: Composition and methane potential for potential alternative sources of energy and products. Bioresource Technology, 2013, 144, 492-498.	4.8	138
24	Combination of Thermal Treatments and Anaerobic Digestion to Reduce Sewage Sludge Quantity and Improve Biogas Yield. Chemical Engineering Research and Design, 2006, 84, 280-284.	2.7	135
25	Comprehensive characterization of the liquid fraction of digestates from full-scale anaerobic co-digestion. Waste Management, 2017, 59, 118-128.	3.7	134
26	Pretreatment and co-digestion of wastewater sludge for biogas production: Recent research advances and trends. Renewable and Sustainable Energy Reviews, 2019, 114, 109287.	8.2	128
27	Enhancement of methane production from sunflower oil cakes by dilute acid pretreatment. Applied Energy, 2013, 102, 1105-1113.	5.1	121
28	A review on key design and operational parameters to optimize and develop hydrothermal liquefaction of biomass for biorefinery applications. Green Chemistry, 2021, 23, 1404-1446.	4.6	117
29	The environmental biorefinery: state-of-the-art on the production of hydrogen and value-added biomolecules in mixed-culture fermentation. Green Chemistry, 2018, 20, 3159-3179.	4.6	109
30	Kinetics of thermophilic batch anaerobic digestion of thermal hydrolysed waste activated sludge. Biochemical Engineering Journal, 2009, 46, 169-175.	1.8	108
31	Biological pretreatments of biomass for improving biogas production: an overview from lab scale to full-scale. Renewable and Sustainable Energy Reviews, 2018, 90, 583-604.	8.2	108
32	Alkaline pretreatment to enhance one-stage CH4 and two-stage H2/CH4 production from sunflower stalks: Mass, energy and economical balances. Chemical Engineering Journal, 2015, 260, 377-385.	6.6	104
33	Improving pig manure conversion into biogas by thermal and thermo-chemical pretreatments. Bioresource Technology, 2009, 100, 3690-3694.	4.8	97
34	Mechanical dissociation and fragmentation of lignocellulosic biomass: Effect of initial moisture, biochemical and structural proprieties on energy requirement. Applied Energy, 2015, 142, 240-246.	5.1	89
35	Effect of enzyme addition on fermentative hydrogen production from wheat straw. International Journal of Hydrogen Energy, 2012, 37, 10639-10647.	3.8	82
36	A vision of European biogas sector development towards 2030: Trends and challenges. Journal of Cleaner Production, 2021, 287, 125065.	4.6	81

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37	Impact of initial biodegradability on sludge anaerobic digestion enhancement by thermal pretreatment. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2008, 43, 1551-1555.	0.9	80
38	Benefit of sodium hydroxide pretreatment of ensiled sorghum forage on the anaerobic reactor stability and methane production. Bioresource Technology, 2013, 144, 149-155.	4.8	79
39	Assessment of hydrothermal pretreatment of various lignocellulosic biomass with CO 2 catalyst for enhanced methane and hydrogen production. Water Research, 2017, 120, 32-42.	5.3	79
40	Modified ADM1 disintegration/hydrolysis structures for modeling batch thermophilic anaerobic digestion of thermally pretreated waste activated sludge. Water Research, 2009, 43, 3479-3492.	5.3	77
41	Anaerobic co-digestion of microalgal biomass and wheat straw with and without thermo-alkaline pretreatment. Bioresource Technology, 2017, 237, 89-98.	4.8	76
42	Yeast cells, beer composition and mean pore diameter impacts on fouling and retention during cross-flow filtration of beer with ceramic membranes. Journal of Membrane Science, 2002, 196, 39-57.	4.1	75
43	Predictive and explicative models of fermentative hydrogen production from solid organic waste: Role of butyrate and lactate pathways. International Journal of Hydrogen Energy, 2014, 39, 7476-7485.	3.8	71
44	Specific inhibition of biohydrogen-producing Clostridium sp. after dilute-acid pretreatment ofÂsunflower stalks. International Journal of Hydrogen Energy, 2013, 38, 12273-12282.	3.8	68
45	Combined Ozone Pretreatment and Anaerobic Digestion for the Reduction of Biological Sludge Production in Wastewater Treatment. Ozone: Science and Engineering, 2007, 29, 201-206.	1.4	67
46	Effect of thermochemical pretreatment on the solubilization and anaerobic biodegradability of the red macroalga Palmaria palmata. Biochemical Engineering Journal, 2013, 79, 253-258.	1.8	65
47	Effect of saponification on the anaerobic digestion of solid fatty residues. Bioresource Technology, 2003, 90, 89-94.	4.8	64
48	Biofilm formation during the start-up period of an anaerobic biofilm reactorâ€"Impact of nutrient complementation. Biochemical Engineering Journal, 2006, 30, 55-62.	1.8	64
49	Effect of sodium hydroxide pretreatment on physical, chemical characteristics and methane production of five varieties of sorghum. Energy, 2013, 55, 449-456.	4.5	64
50	White-Rot Fungi pretreatment of lignocellulosic biomass for anaerobic digestion: Impact of glucose supplementation. Process Biochemistry, 2016, 51, 1784-1792.	1.8	64
51	Batch and semi-continuous anaerobic digestion of Palmaria palmata: Comparison with Saccharina latissima and inhibition studies. Chemical Engineering Journal, 2012, 209, 513-519.	6.6	63
52	Enhancement of microalgae anaerobic digestion by thermo-alkaline pretreatment with lime (CaO). Algal Research, 2017, 24, 199-206.	2.4	63
53	Combining anaerobic digestion and ozonation to remove PAH from urban sludge. Process Biochemistry, 2005, 40, 3244-3250.	1.8	61
54	Understanding biomass recalcitrance in grasses for their efficient utilization as biorefinery feedstock. Reviews in Environmental Science and Biotechnology, 2018, 17, 707-748.	3.9	58

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55	Thermal pre-treatment of aerobic granular sludge: Impact on anaerobic biodegradability. Water Research, 2011, 45, 6011-6020.	5.3	57
56	PAH fate during the anaerobic digestion of contaminated sludge: Do bioavailability and/or cometabolism limit their biodegradation?. Water Research, 2010, 44, 3797-3806.	5.3	56
57	Continuous biohydrogen production from a food industry waste: Influence of operational parameters and microbial community analysis. Journal of Cleaner Production, 2018, 174, 1054-1063.	4.6	56
58	Enhancement of biogas production from Ulva sp. by using solid-state fermentation as biological pretreatment. Algal Research, 2017, 27, 206-214.	2.4	55
59	Ozone pre-treatment as improver of PAH removal during anaerobic digestion of urban sludge. Chemosphere, 2007, 68, 1013-1019.	4.2	54
60	Micropollutant and Sludge Characterization for Modeling Sorption Equilibria. Environmental Science & Technology, 2010, 44, 1100-1106.	4.6	52
61	Effects of grinding processes on anaerobic digestion of wheat straw. Industrial Crops and Products, 2015, 74, 450-456.	2.5	52
62	Modelling the clarification of lactic acid fermentation broths by cross-flow microfiltration. Journal of Membrane Science, 2001, 186, 219-230.	4.1	51
63	Effects of thermal hydrolysis on activated sludge solubilization, surface properties and heavy metals biosorption. Chemical Engineering Journal, 2011, 166, 841-849.	6.6	51
64	The type of carbohydrates specifically selects microbial community structures and fermentation patterns. Bioresource Technology, 2016, 221, 541-549.	4.8	49
65	Mild microwaves, ultrasonic and alkaline pretreatments for improving methane production: Impact on biochemical and structural properties of olive pomace. Bioresource Technology, 2020, 299, 122591.	4.8	49
66	Software for biogas research: Tools for measurement and prediction of methane production. SoftwareX, 2018, 7, 205-210.	1.2	47
67	Improving methane production during the codigestion of waste-activated sludge and fatty wastewater: Impact of thermo-alkaline pretreatment on batch and semi-continuous processes. Chemical Engineering Journal, 2012, 210, 404-409.	6.6	44
68	Solid-state anaerobic digestion of wheat straw: Impact of S/I ratio and pilot-scale fungal pretreatment. Waste Management, 2019, 85, 464-476.	3.7	43
69	Saponification of fatty slaughterhouse wastes for enhancing anaerobic biodegradability. Bioresource Technology, 2009, 100, 3695-3700.	4.8	42
70	Influence of feed characteristics on the removal of micropollutants during the anaerobic digestion of contaminated sludge. Journal of Hazardous Materials, 2010, 181, 241-247.	6.5	41
71	Two-Stage Alkalineâ€“Enzymatic Pretreatments To Enhance Biohydrogen Production from Sunflower Stalks. Environmental Science & Technology, 2013, 47, 12591-12599.	4.6	40
72	A three-compartment model for micropollutants sorption in sludge: Methodological approach and insights. Water Research, 2010, 44, 616-624.	5.3	38

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73	Influence of alkaline pre-treatment conditions on structural features and methane production from ensiled sorghum forage. Chemical Engineering Journal, 2012, 211-212, 488-492.	6.6	38
74	Removal of polycyclic aromatic hydrocarbons (PAH) during anaerobic digestion with recirculation of ozonated digested sludge. Journal of Hazardous Materials, 2009, 162, 1145-1150.	6.5	37
75	Clarification of lactic acid fermentation broths. Separation and Purification Technology, 2001, 22-23, 393-401.	3.9	36
76	Saponification pretreatment and solids recirculation as a new anaerobic process for the treatment of slaughterhouse waste. Bioresource Technology, 2013, 131, 460-467.	4.8	33
77	New fractionation for a better bioaccessibility description of particulate organic matter in a modified ADM1 model. Chemical Engineering Journal, 2013, 228, 871-881.	6.6	33
78	Combined ozone pretreatment and biological processes for removal of colored and biorefractory compounds in wastewater from molasses fermentation industries. Journal of Chemical Technology and Biotechnology, 2010, 85, 968-975.	1.6	32
79	Influence of white-rot fungus Polyporus brumalis BRFM 985 culture conditions on the pretreatment efficiency for anaerobic digestion of wheat straw. Biomass and Bioenergy, 2018, 110, 75-79.	2.9	31
80	Modelling the microfiltration of lactic acid fermentation broths and comparison of operating modes. Desalination, 2002, 145, 201-206.	4.0	27
81	Effect of coupling alkaline pretreatment and sewage sludge co-digestion on methane production and fertilizer potential of digestate. Science of the Total Environment, 2020, 743, 140670.	3.9	27
82	Application of optimized alkaline pretreatment for enhancing the anaerobic digestion of different sunflower stalks varieties. Environmental Technology (United Kingdom), 2013, 34, 2155-2162.	1.2	25
83	Pyrolysis-GCâ€“MS to assess the fungal pretreatment efficiency for wheat straw anaerobic digestion. Journal of Analytical and Applied Pyrolysis, 2017, 123, 409-418.	2.6	25
84	Sorghum Biomethane Potential Varies with the Genotype and the Cultivation Site. Waste and Biomass Valorization, 2019, 10, 783-788.	1.8	25
85	Evaluation of agronomic properties of digestate from macroalgal residues anaerobic digestion: Impact of pretreatment and co-digestion with waste activated sludge. Waste Management, 2020, 108, 127-136.	3.7	22
86	Thermal Hydrolysis of Municipal sludge: Finding the Temperature Sweet Spot: A Review. Waste and Biomass Valorization, 2021, 12, 2187-2205.	1.8	22
87	Assessment of cross-flow filtration as microalgae harvesting technique prior to anaerobic digestion: Evaluation of biomass integrity and energy demand. Bioresource Technology, 2018, 269, 188-194.	4.8	21
88	Methane Production Variability According to Miscanthus Genotype and Alkaline Pretreatments at High Solid Content. Bioenergy Research, 2019, 12, 325-337.	2.2	21
89	Correlations between the Composition of Liquid Fraction of Full-Scale Digestates and Process Conditions. Energies, 2021, 14, 971.	1.6	21
90	Influence of hydrodynamic conditions on the start-up of methanogenic inverse turbulent bed reactors. Water Research, 2007, 41, 603-612.	5.3	19

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91	New sustainable bioconversion concept of date by-products (Phoenix dactylifera L.) to biohydrogen, biogas and date-syrup. International Journal of Hydrogen Energy, 2021, 46, 297-305.	3.8	19
92	Lime Pretreatment of Miscanthus: Impact on BMP and Batch Dry Co-Digestion with Cattle Manure. Molecules, 2018, 23, 1608.	1.7	18
93	Formic acid pretreatment for enhanced production of bioenergy and biochemicals from organic solid waste. Biomass and Bioenergy, 2020, 133, 105455.	2.9	18
94	Parameters explaining removal of PAHs from sewage sludge by ozonation. AICHE Journal, 2006, 52, 3612-3620.	1.8	17
95	Anaerobic Biodegradation of Celluloseâ€“Xylanâ€“Lignin Nanocomposites as Model Assemblies of Lignocellulosic Biomass. Waste and Biomass Valorization, 2014, 5, 293-304.	1.8	17
96	Improvement of anaerobic digestion of swine slurry by steam explosion and chemical pretreatment application. Assessment based on kinetic analysis. Journal of Environmental Chemical Engineering, 2016, 4, 2033-2039.	3.3	17
97	Combination of Dry Milling and Separation Processes with Anaerobic Digestion of Olive Mill Solid Waste: Methane Production and Energy Efficiency. Molecules, 2018, 23, 3295.	1.7	17
98	Screening of Phytophagous and Xylophagous Insects Guts Microbiota Abilities to Degrade Lignocellulose in Bioreactor. Frontiers in Microbiology, 2018, 9, 2222.	1.5	17
99	Comparison of operating modes for clarifying lactic acid fermentation broths by batch cross-flow microfiltration. Process Biochemistry, 2001, 36, 751-756.	1.8	16
100	Kinetics and reversibility of micropollutant sorption in sludge. Journal of Environmental Monitoring, 2011, 13, 2770.	2.1	16
101	Assessment of fungal and thermo-alkaline post-treatments of solid digestate in a recirculation scheme to increase flexibility in feedstocks supply management of biogas plants. Renewable Energy, 2020, 149, 641-651.	4.3	15
102	Effect of Particle Size on Methane Production of Raw and Alkaline Pre-treated Ensiled Sorghum Forage. Waste and Biomass Valorization, 2013, 4, 549-556.	1.8	13
103	Evidence for PAH Removal Coupled to the First Steps of Anaerobic Digestion in Sewage Sludge. International Journal of Chemical Engineering, 2013, 2013, 1-6.	1.4	13
104	Impact of xylan structure and ligninâ€“xylan association on methane production from C5-sugars. Biomass and Bioenergy, 2014, 63, 33-45.	2.9	12
105	Recirculation of solid digestate to enhance energy efficiency of biogas plants: Strategies, conditions and impacts. Energy Conversion and Management, 2021, 231, 113759.	4.4	12
106	Comparison of pre- and inter-stage aerobic treatment of wastewater sludge: Effects on biogas production and COD removal. Bioresource Technology, 2018, 247, 332-339.	4.8	11
107	Anaerobic digestion industries progress throughout the world. IOP Conference Series: Earth and Environmental Science, 2020, 476, 012074.	0.2	11
108	Impacts of Chemical-Assisted Thermal Pretreatments on Methane Production from Fruit and Vegetable Harvesting Wastes: Process Optimization. Molecules, 2020, 25, 500.	1.7	11

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109	Trends and Challenges in Biohydrogen Production from Agricultural Waste. , 2017, , 69-95.		9
110	Study of hydrodynamic parameters in the cross-flow filtration of guar gum pseudoplastic solutions. Journal of Membrane Science, 2000, 174, 135-145.	4.1	7
111	Effect of the Addition of Bentonite on the Anaerobic Biodegradability of Solid Fatty Wastes. Environmental Technology (United Kingdom), 2004, 25, 459-469.	1.2	7
112	Soft Microwave Pretreatment to Extract P-Hydroxycinnamic Acids from Grass Stalks. Molecules, 2019, 24, 3885.	1.7	7
113	Enhancement of corn stover conversion to carboxylates by extrusion and biotic triggers in solid-state fermentation. Applied Microbiology and Biotechnology, 2019, 103, 489-503.	1.7	7
114	Life Cycle Assessment of Two Alkaline Pretreatments of Sorghum and Miscanthus and of Their Batch Co-digestion with Cow Manure. Bioenergy Research, 2022, 15, 810-833.	2.2	7
115	Industrial multi-stage continuous filtration process: influence of operating parameters. Journal of Membrane Science, 1996, 110, 191-202.	4.1	5
116	Hydrodynamical behaviour of non Newtonian flows in a cross-flow filtration tubular module. Experiments in Fluids, 1998, 25, 243-253.	1.1	4
117	Mobilizing sorghum genetic diversity: Biochemical and histologicalâ€assisted design of a stem ideotype for biomethane production. GCB Bioenergy, 2021, 13, 1874-1893.	2.5	3
118	Algal Biomass. , 2015, , 195-226.		2
119	Dataset of organic sample near infrared spectra acquired on different spectrometers. Data in Brief, 2020, 32, 106264.	0.5	2
120	Alkaline Pretreatments for Sorghum and Miscanthus Anaerobic Digestion: Impacts at Cell Wall and Tissue Scales. Bioenergy Research, 0, , 1.	2.2	2
121	Screening and Application of Ligninolytic Microbial Consortia to Enhance Aerobic Degradation of Solid Digestate. Microorganisms, 2022, 10, 277.	1.6	2
122	Mass transfer modeling during crossâ€flow filtration of nonâ€newtonian fluids. Canadian Journal of Chemical Engineering, 1999, 77, 584-589.	0.9	1
123	Co-ensiling and field wilting investigated as preparation methods for the ensiling of a wet harvested catch crop for biomethane production. Renewable Energy, 2022, 195, 1230-1237.	4.3	1
124	Production of Organic Acids from Fermentation Broth â€" Process Design Targeted around Electromembrane Operations. Chemie-Ingenieur-Technik, 2001, 73, 757-757.	0.4	0
125	Concentration of thickening & gelling food additives by ultrafiltration: comparison of flat sheet and tubular membranes. Filtration and Separation, 2002, 39, 35-34.	0.2	0
126	Methods to Assess Biological Transformation of Biomass. , 2020, , 641-730.		0