Marta Carballa

List of Publications by Year
in descending order

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Version: 2024-02-01

90 papers	8,429 citations	53794 45 h-index	49909 87 g-index
92 all docs	92 docs citations	92 times ranked	8441 citing authors

#	Article	IF	Citations
1	Behavior of pharmaceuticals, cosmetics and hormones in a sewage treatment plant. Water Research, 2004, 38, 2918-2926.	11.3	1,277
2	Towards a standardization of biomethane potential tests. Water Science and Technology, 2016, 74, 2515-2522.	2.5	592
3	Minimizing losses in bio-electrochemical systems: the road to applications. Applied Microbiology and Biotechnology, 2008, 79, 901-913.	3.6	382
4	How are pharmaceutical and personal care products (PPCPs) removed from urban wastewaters?. Reviews in Environmental Science and Biotechnology, 2008, 7, 125-138.	8.1	365
5	Fate of pharmaceutical and personal care products (PPCPs) during anaerobic digestion of sewage sludge. Water Research, 2007, 41, 2139-2150.	11.3	332
6	Aggregate Size and Architecture Determine Microbial Activity Balance for One-Stage Partial Nitritation and Anammox. Applied and Environmental Microbiology, 2010, 76, 900-909.	3.1	318
7	Microbial management of anaerobic digestion: exploiting the microbiome-functionality nexus. Current Opinion in Biotechnology, 2015, 33, 103-111.	6.6	268
8	Determination of the solidâ€“water distribution coefficient (Kd) for pharmaceuticals, estrogens and musk fragrances in digested sludge. Water Research, 2008, 42, 287-295.	11.3	265
9	Removal of cosmetic ingredients and pharmaceuticals in sewage primary treatment. Water Research, 2005, 39, 4790-4796.	11.3	229
10	Influence of nitrifying conditions on the biodegradation andÂsorption of emerging micropollutants. Water Research, 2012, 46, 5434-5444.	11.3	225
11	Enhanced biomethanation of kitchen waste by different pre-treatments. Bioresource Technology, 2011, 102, 592-599.	9.6	206
12	Relationship between microbial activity and microbial community structure in six full-scale anaerobic digesters. Microbiological Research, 2012, 167, 581-589.	5.3	186
13	Nitrogen Removal from Digested Black Water by One-Stage Partial Nitritation and Anammox. Environmental Science & Technology, 2009, 43, 5035-5041.	10.0	160
14	Comparison of predicted and measured concentrations of selected pharmaceuticals, fragrances and hormones in Spanish sewage. Chemosphere, 2008, 72, 1118-1123.	8.2	154
15	Diclofenac Oxidation by Biogenic Manganese Oxides. Environmental Science & Technology, 2010, 44, 3449-3454.	10.0	141
16	Relationship between phenol degradation efficiency and microbial community structure in an anaerobic SBR. Water Research, 2013, 47, 6739-6749.	11.3	133
17	Phosphate removal in agro-industry: Pilot- and full-scale operational considerations of struvite crystallization. Water Research, 2009, 43, 1887-1892.	11.3	132
18	Environmental assessment of anaerobically digested sludge reuse in agriculture: Potential impacts of emerging micropollutants. Water Research, 2010, 44, 3225-3233.	11.3	121

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19	Influence of ozone pre-treatment on sludge anaerobic digestion: Removal of pharmaceutical and personal care products. Chemosphere, 2007, 67, 1444-1452.	8.2	117
20	Key microbial communities steering the functioning of anaerobic digesters during hydraulic and organic overloading shocks. Bioresource Technology, 2015, 197, 208-216.	9.6	114
21	Should We Pretreat Solid Waste Prior to Anaerobic Digestion? An Assessment of Its Environmental Cost. Environmental Science & Technology, 2011, 45, 10306-10314.	10.0	100
22	Biogenic metals for the oxidative and reductive removal ofÂpharmaceuticals, biocides and iodinated contrast media inÂaÂpolishing membrane bioreactor. Water Research, 2011, 45, 1763-1773.	11.3	99
23	Comparison between the conventional anaerobic digestion of sewage sludge and its combination with a chemical or thermal pre-treatment concerning the removal of pharmaceuticals and personal care products. Water Science and Technology, 2006, 53, 109-117.	2.5	98
24	Correlations between molecular and operational parameters in continuous lab-scale anaerobic reactors. Applied Microbiology and Biotechnology, 2011, 89, 303-314.	3.6	91
25	Application of immobilized TiO2 on PVDF dual layer hollow fibre membrane to improve the photocatalytic removal of pharmaceuticals in different water matrices. Applied Catalysis B: Environmental, 2019, 240, 9-18.	20.2	91
26	Calculation Methods to Perform Mass Balances of Micropollutants in Sewage Treatment Plants. Application to Pharmaceutical and Personal Care Products (PPCPs). Environmental Science & Technology, 2007, 41, 884-890.	10.0	88
27	Biodegradation kinetic constants and sorption coefficients of micropollutants in membrane bioreactors. Biodegradation, 2013, 24, 165-177.	3.0	82
28	Presence does not imply activity: DNA and RNA patterns differ in response to salt perturbation in anaerobic digestion. Biotechnology for Biofuels, 2016, 9, 244.	6.2	81
29	Long-chain acylhomoserine lactones increase the anoxic ammonium oxidation rate in an OLAND biofilm. Applied Microbiology and Biotechnology, 2011, 90, 1511-1519.	3.6	80
30	Influence of temperature on the hydrolysis, acidogenesis and methanogenesis in mesophilic anaerobic digestion: parameter identification and modeling application. Water Science and Technology, 2009, 60, 9-17.	2.5	78
31	Role of methanogenesis on the biotransformation of organic micropollutants during anaerobic digestion. Science of the Total Environment, 2018, 622-623, 459-466.	8.0	75
32	Biotransformation of organic micropollutants by anaerobic sludge enzymes. Water Research, 2019, 152, 202-214.	11.3	71
33	Improvement of the anaerobic treatment of potato processing wastewater in a UASB reactor by co-digestion with glycerol. Biotechnology Letters, 2008, 30, 861-867.	2.2	69
34	Modelling cometabolic biotransformation of organic micropollutants in nitrifying reactors. Water Research, 2014, 65, 371-383.	11.3	68
35	Comprehensive comparison of chemically enhanced primary treatment and high-rate activated sludge in novel wastewater treatment plant configurations. Water Research, 2020, 169, 115258.	11.3	67
36	Organic overloading affects the microbial interactions during anaerobic digestion in sewage sludge reactors. Chemosphere, 2019, 222, 323-332.	8.2	66

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37	Cometabolic Enzymatic Transformation of Organic Micropollutants under Methanogenic Conditions. Environmental Science & Technology, 2017, 51, 2963-2971.	10.0	63
38	Influence of manganese and ammonium oxidation on the removal of 17Î±-ethinylestradiol (EE2). Water Research, 2009, 43, 77-86.	11.3	58
39	Biological removal of 17Î±â€ethinylestradiol (EE2) in an aerated nitrifying fixed bed reactor during ammonium starvation. Journal of Chemical Technology and Biotechnology, 2009, 84, 119-125.	3.2	53
40	Resource recovery from pig manure via an integrated approach: A technical and economic assessment for full-scale applications. Bioresource Technology, 2019, 272, 582-593.	9.6	52
41	Enhanced methane production from pig manure anaerobic digestion using fish and biodiesel wastes as co-substrates. Bioresource Technology, 2012, 123, 507-513.	9.6	51
42	Outlining microbial community dynamics during temperature drop and subsequent recovery period in anaerobic co-digestion systems. Journal of Biotechnology, 2014, 192, 179-186.	3.8	50
43	Why are organic micropollutants not fully biotransformed? A mechanistic modelling approach to anaerobic systems. Water Research, 2018, 142, 115-128.	11.3	50
44	Maximum removal rate of propionic acid as a sole carbon source in UASB reactors and the importance of the macro- and micro-nutrients stimulation. Bioresource Technology, 2009, 100, 3477-3482.	9.6	49
45	Assessing the degradation of ochratoxin a using a bioassay: the case of contaminated winery wastewater. Water Science and Technology, 2007, 56, 55-61.	2.5	47
46	Assessing anaerobic co-digestion of pig manure with agroindustrial wastes: The link between environmental impacts and operational parameters. Science of the Total Environment, 2014, 497-498, 475-483.	8.0	46
47	Enhanced propionic acid degradation (EPAD) system: Proof of principle and feasibility. Water Research, 2009, 43, 3239-3248.	11.3	45
48	Granular biomass capable of partial nitritation and anammox. Water Science and Technology, 2008, 58, 1113-1120.	2.5	44
49	Blending based optimisation and pretreatment strategies to enhance anaerobic digestion of poultry manure. Waste Management, 2018, 71, 521-531.	7.4	44
50	Acidogenesis is a key step in the anaerobic biotransformation of organic micropollutants. Journal of Hazardous Materials, 2020, 389, 121888.	12.4	42
51	Influence of Different Pretreatments on Anaerobically Digested Sludge Characteristics: Suitability for Final Disposal. Water, Air, and Soil Pollution, 2009, 199, 311-321.	2.4	41
52	Strategies to optimize phosphate removal from industrial anaerobic effluents by magnesium ammonium phosphate (MAP) production. Journal of Chemical Technology and Biotechnology, 2009, 84, 63-68.	3.2	38
53	Integrating granular activated carbon in the post-treatment of membrane and settler effluents to improve organic micropollutants removal. Chemical Engineering Journal, 2018, 345, 79-86.	12.7	36
54	Protein composition determines the preferential consumption of amino acids during anaerobic mixed-culture fermentation. Water Research, 2020, 183, 115958.	11.3	36

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55	Thermal hydrolysis of sewage sludge partially removes organic micropollutants but does not enhance their anaerobic biotransformation. Science of the Total Environment, 2019, 690, 534-542.	8.0	35
56	Influence of transitional states on the microbial ecology of anaerobic digesters treating solid wastes. Applied Microbiology and Biotechnology, 2014, 98, 2015-2027.	3.6	32
57	Microbiome response to controlled shifts in ammonium and LCFA levels in co-digestion systems. Journal of Biotechnology, 2016, 220, 35-44.	3.8	32
58	A low volumetric exchange ratio allows high autotrophic nitrogen removal in a sequencing batch reactor. Bioresource Technology, 2009, 100, 5010-5015.	9.6	31
59	Metabolic modeling for predicting VFA production from proteinâ€rich substrates by mixedâ€culture fermentation. Biotechnology and Bioengineering, 2020, 117, 73-84.	3.3	31
60	The organic loading rate affects organic micropollutantsâ€™ cometabolic biotransformation kinetics under heterotrophic conditions in activated sludge. Water Research, 2021, 189, 116587.	11.3	28
61	Enhancing thermophilic co-digestion of nitrogen-rich substrates by air side-stream stripping. Bioresource Technology, 2017, 241, 397-405.	9.6	27
62	Principles, Advances, and Perspectives of Anaerobic Digestion of Lipids. Environmental Science & Technology, 2022, 56, 4749-4775.	10.0	27
63	Energetic and economic assessment of sludge thermal hydrolysis in novel wastewater treatment plant configurations. Waste Management, 2019, 92, 30-38.	7.4	26
64	Reversibility of enzymatic reactions might limit biotransformation of organic micropollutants. Science of the Total Environment, 2019, 665, 574-578.	8.0	25
65	A metabolic model for targeted volatile fatty acids production by cofermentation of carbohydrates and proteins. Bioresource Technology, 2020, 298, 122535.	9.6	25
66	Enzymatic cometabolic biotransformation of organic micropollutants in wastewater treatment plants: A review. Bioresource Technology, 2022, 344, 126291.	9.6	25
67	Treatment of winery wastewaters in a membrane submerged bioreactor. Water Science and Technology, 2007, 56, 63-69.	2.5	23
68	The ManureEcoMine pilot installation: advanced integration of technologies for the management of organics and nutrients in livestock waste. Water Science and Technology, 2017, 75, 1281-1293.	2.5	21
69	Airâ€side ammonia stripping coupled to anaerobic digestion indirectly impacts anaerobic microbiome. Microbial Biotechnology, 2019, 12, 1403-1416.	4.2	19
70	Successful hydraulic strategies to start up OLAND sequencing batch reactors at lab scale. Microbial Biotechnology, 2012, 5, 403-414.	4.2	18
71	Heterotrophic enzymatic biotransformations of organic micropollutants in activated sludge. Science of the Total Environment, 2021, 780, 146564.	8.0	18
72	Feasibility of spent metalworking fluids as co-substrate for anaerobic co-digestion. Bioresource Technology, 2014, 155, 281-288.	9.6	16

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73	A combination of ammonia stripping and low temperature thermal pre-treatment improves anaerobic post-digestion of the supernatant from organic fraction of municipal solid waste treatment. Waste Management, 2018, 78, 271-278.	7.4	13
74	Feeding composition and sludge retention time both affect (co-)metabolic biotransformation of pharmaceutical compounds in activated sludge systems. Journal of Environmental Chemical Engineering, 2021, 9, 105123.	6.7	13
75	Technical and economic feasibility of gradual concentric chambers reactor for sewage treatment in developing countries. Electronic Journal of Biotechnology, 2009, 12, 0-0.	2.2	11
76	Criteria for Designing Sewage Treatment Plants for Enhanced Removal of Organic Micropollutants. Environmental Pollution, 2010, , 283-306.	0.4	9
77	Prediction of Heavy Metals Mobility and Bioavailability in Contaminated Soil Using Sequential Extraction and Biosensors. Journal of Environmental Engineering, ASCE, 2009, 135, 839-844.	1.4	8
78	Ureolytic phosphate precipitation from anaerobic effluents. Water Science and Technology, 2009, 59, 1983-1988.	2.5	8
79	An optimised control system to steer the transition from anaerobic mono- to co-digestion in full-scale plants. Environmental Science: Water Research and Technology, 2019, 5, 1004-1011.	2.4	7
80	Treatment of low and medium strength sewage in a lab-scale gradual concentric chambers (GCC) reactor. Water Science and Technology, 2008, 57, 1155-1160.	2.5	6
81	Opportunities for rotating belt filters in novel wastewater treatment plant configurations. Environmental Science: Water Research and Technology, 2019, 5, 704-712.	2.4	6
82	Removal of organic micro-pollutants by anaerobic microbes and enzymes. , 2020, , 397-426.		6
83	Microbial invasions in sludge anaerobic digesters. Applied Microbiology and Biotechnology, 2021, 105, 21-33.	3.6	6
84	Assessment of the fate of organic micropollutants in novel wastewater treatment plant configurations through an empirical mechanistic model. Science of the Total Environment, 2020, 716, 137079.	8.0	4
85	Treatment of Sanitary Landfill Leachates in a Lab-Scale Gradual Concentric Chamber (GCC) Reactor. Applied Biochemistry and Biotechnology, 2010, 160, 1822-1832.	2.9	2
86	Treatment of low strength sewage with high suspended organic matter content in an anaerobic sequencing batch reactor and modeling application. Electronic Journal of Biotechnology, 2009, 12, .	2.2	1
87	How should ecohazard of micropollutants in wastewater be gauged? Using bioassays to profile alternative tertiary treatments. Environmental Engineering Research, 0, , .	2.5	1
88	Engineering the outcome of cofermentation processes by altering the feedstock sugar-to-protein ratio. Environmental Science: Water Research and Technology, 2022, 8, 1478-1488.	2.4	1
89	Influence of hydraulic retention time on the psychrophilic hydrolysis/acidogenesis of proteins. Water Science and Technology, 2016, 74, 2399-2406.	2.5	0
90	Fate of Emerging Pollutants During Anaerobic Digestion of Sewage Sludge. Handbook of Environmental Chemistry, 2022, , 1.	0.4	0