

# Raquel Lebrero

## List of Publications by Year in descending order

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104  
papers

3,875  
citations

109137

35  
h-index

143772

57  
g-index

107  
all docs

107  
docs citations

107  
times ranked

2748  
citing authors

#	ARTICLE	IF	CITATIONS
1	A state-of-the-art review on indoor air pollution and strategies for indoor air pollution control. <i>Chemosphere</i> , 2021, 262, 128376.	4.2	225
2	Odor Assessment and Management in Wastewater Treatment Plants: A Review. <i>Critical Reviews in Environmental Science and Technology</i> , 2011, 41, 915-950.	6.6	162
3	A Comparative Analysis of Odour Treatment Technologies in Wastewater Treatment Plants. <i>Environmental Science &amp; Technology</i> , 2011, 45, 1100-1106.	4.6	154
4	Monitoring techniques for odour abatement assessment. <i>Water Research</i> , 2010, 44, 5129-5149.	5.3	153
5	A sensitivity analysis of process design parameters, commodity prices and robustness on the economics of odour abatement technologies. <i>Biotechnology Advances</i> , 2012, 30, 1354-1363.	6.0	108
6	Biotechnologies for greenhouse gases (CH <sub>4</sub> , N <sub>2</sub> O, and CO <sub>2</sub> ) abatement: state of the art and challenges. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 2277-2303.	1.7	108
7	Biogas-based polyhydroxyalkanoates production by <i>Methylocystis hirsuta</i> : A step further in anaerobic digestion biorefineries. <i>Chemical Engineering Journal</i> , 2018, 333, 529-536.	6.6	87
8	Odor abatement in biotrickling filters: Effect of the EBRT on methyl mercaptan and hydrophobic VOCs removal. <i>Bioresource Technology</i> , 2012, 109, 38-45.	4.8	86
9	Comparative assessment of a biofilter, a biotrickling filter and a hollow fiber membrane bioreactor for odor treatment in wastewater treatment plants. <i>Water Research</i> , 2014, 49, 339-350.	5.3	84
10	Simultaneous biogas upgrading and centrate treatment in an outdoors pilot scale high rate algal pond. <i>Bioresource Technology</i> , 2017, 232, 133-141.	4.8	84
11	Photosynthetic biogas upgrading to bio-methane: Boosting nutrient recovery via biomass productivity control. <i>Algal Research</i> , 2016, 17, 46-52.	2.4	83
12	Technologies for the bioconversion of methane into more valuable products. <i>Current Opinion in Biotechnology</i> , 2018, 50, 128-135.	3.3	81
13	H <sub>2</sub> S and VOCs abatement robustness in biofilters and air diffusion bioreactors: A comparative study. <i>Water Research</i> , 2010, 44, 3905-3914.	5.3	75
14	A comparative analysis of biogas upgrading technologies: Photosynthetic vs physical/chemical processes. <i>Algal Research</i> , 2017, 25, 237-243.	2.4	71
15	Methane abatement in a gas-recycling biotrickling filter: Evaluating innovative operational strategies to overcome mass transfer limitations. <i>Chemical Engineering Journal</i> , 2014, 253, 385-393.	6.6	69
16	Selection of odour removal technologies in wastewater treatment plants: A guideline based on Life Cycle Assessment. <i>Journal of Environmental Management</i> , 2015, 149, 77-84.	3.8	65
17	Influence of the gas-liquid flow configuration in the absorption column on photosynthetic biogas upgrading in algal-bacterial photobioreactors. <i>Bioresource Technology</i> , 2017, 225, 336-342.	4.8	63
18	Technology validation of photosynthetic biogas upgrading in a semi-industrial scale algal-bacterial photobioreactor. <i>Bioresource Technology</i> , 2019, 279, 43-49.	4.8	63

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19	Biogas upgrading from vinasse digesters: a comparison between an anoxic biotrickling filter and an algal-bacterial photobioreactor. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 2488-2495.	1.6	62
20	Anoxic biodegradation of BTEX in a biotrickling filter. <i>Science of the Total Environment</i> , 2017, 587-588, 457-465.	3.9	61
21	Seasonal variation of biogas upgrading coupled with digestate treatment in an outdoors pilot scale algal-bacterial photobioreactor. <i>Bioresource Technology</i> , 2018, 263, 58-66.	4.8	61
22	Simultaneous methane abatement and PHB production by <i>Methylocystis hirsuta</i> in a novel gas-recycling bubble column bioreactor. <i>Chemical Engineering Journal</i> , 2018, 334, 691-697.	6.6	61
23	A comparative assessment of biofiltration and activated sludge diffusion for odour abatement. <i>Journal of Hazardous Materials</i> , 2011, 190, 622-630.	6.5	58
24	Inspired by nature: Microbial production, degradation and valorization of biodegradable bioplastics for life-cycle-engineered products. <i>Biotechnology Advances</i> , 2021, 53, 107772.	6.0	55
25	Toluene mass transfer characterization in a biotrickling filter. <i>Biochemical Engineering Journal</i> , 2012, 60, 44-49.	1.8	53
26	Exploring the potential of fungi for methane abatement: Performance evaluation of a fungal-bacterial biofilter. <i>Chemosphere</i> , 2016, 144, 97-106.	4.2	49
27	Influence of alkalinity and temperature on photosynthetic biogas upgrading efficiency in high rate algal ponds. <i>Algal Research</i> , 2018, 33, 284-290.	2.4	49
28	Genome scale metabolic modeling reveals the metabolic potential of three Type II methanotrophs of the genus <i>Methylocystis</i> . <i>Metabolic Engineering</i> , 2019, 54, 191-199.	3.6	48
29	Abatement of odorant compounds in one- and two-phase biotrickling filters under steady and transient conditions. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 4627-4638.	1.7	47
30	Step-feed biofiltration: A low cost alternative configuration for off-gas treatment. <i>Water Research</i> , 2013, 47, 4312-4321.	5.3	42
31	Continuous abatement of methane coupled with ectoine production by <i>Methylomicrobium alcaliphilum</i> 20Z in stirred tank reactors: A step further towards greenhouse gas biorefineries. <i>Journal of Cleaner Production</i> , 2017, 152, 134-141.	4.6	42
32	Polyhydroxyalkanoates (PHA) production from biogas in waste treatment facilities: Assessing the potential impacts on economy, environment and society. <i>Chemosphere</i> , 2020, 255, 126929.	4.2	40
33	A membrane bioreactor for the simultaneous treatment of acetone, toluene, limonene and hexane at trace level concentrations. <i>Water Research</i> , 2013, 47, 2199-2212.	5.3	39
34	Characterization and biofiltration of a real odorous emission from wastewater treatment plant sludge. <i>Journal of Environmental Management</i> , 2013, 116, 50-57.	3.8	39
35	Review of odour abatement in sewer networks. <i>Journal of Environmental Chemical Engineering</i> , 2016, 4, 3866-3881.	3.3	39
36	Multi-production of high added market value metabolites from diluted methane emissions via methanotrophic extremophiles. <i>Bioresource Technology</i> , 2018, 267, 401-407.	4.8	37

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37	Integral (VOCs, CO <sub>2</sub> , mercaptans and H <sub>2</sub> S) photosynthetic biogas upgrading using innovative biogas and digestate supply strategies. <i>Chemical Engineering Journal</i> , 2018, 354, 363-369.	6.6	37
38	Influence of liquid-to-biogas ratio and alkalinity on the biogas upgrading performance in a demo scale algal-bacterial photobioreactor. <i>Bioresource Technology</i> , 2019, 280, 112-117.	4.8	37
39	Anoxic denitrification of BTEX: Biodegradation kinetics and pollutant interactions. <i>Journal of Environmental Management</i> , 2018, 214, 125-136.	3.8	36
40	Biogas valorization via continuous polyhydroxybutyrate production by <i>Methylocystis hirsuta</i> in a bubble column bioreactor. <i>Waste Management</i> , 2020, 113, 395-403.	3.7	36
41	Influence of the seasonal variation of environmental conditions on biogas upgrading in an outdoors pilot scale high rate algal pond. <i>Bioresource Technology</i> , 2018, 255, 354-358.	4.8	35
42	Ectoine bio-milking in methanotrophs: A step further towards methane-based bio-refineries into high added-value products. <i>Chemical Engineering Journal</i> , 2017, 328, 44-48.	6.6	34
43	Feast-famine biofilter operation for methane mitigation. <i>Journal of Cleaner Production</i> , 2018, 170, 108-118.	4.6	34
44	Evaluation of the influence of methane and copper concentration and methane mass transport on the community structure and biodegradation kinetics of methanotrophic cultures. <i>Journal of Environmental Management</i> , 2016, 171, 11-20.	3.8	33
45	Bio-conversion of methane into high profit margin compounds: an innovative, environmentally friendly and cost-effective platform for methane abatement. <i>World Journal of Microbiology and Biotechnology</i> , 2019, 35, 16.	1.7	33
46	Comparative evaluation of a biotrickling filter and a tubular photobioreactor for the continuous abatement of toluene. <i>Journal of Hazardous Materials</i> , 2019, 380, 120860.	6.5	31
47	Comparative performance evaluation of conventional and two-phase hydrophobic stirred tank reactors for methane abatement: Mass transfer and biological considerations. <i>Biotechnology and Bioengineering</i> , 2016, 113, 1203-1212.	1.7	30
48	Continuous photosynthetic abatement of CO <sub>2</sub> and volatile organic compounds from exhaust gas coupled to wastewater treatment: Evaluation of tubular algal-bacterial photobioreactor. <i>Journal of CO<sub>2</sub> Utilization</i> , 2017, 21, 353-359.	3.3	30
49	Multiresidue analytical method for pharmaceuticals and personal care products in sewage and sewage sludge by online direct immersion SPME on-fiber derivatization " GCMS. <i>Talanta</i> , 2018, 186, 506-512.	2.9	30
50	Long-term photosynthetic CO <sub>2</sub> removal from biogas and flue-gas: Exploring the potential of closed photobioreactors for high-value biomass production. <i>Science of the Total Environment</i> , 2018, 640-641, 1272-1278.	3.9	30
51	Hexane biodegradation in two-liquid phase biofilters operated with hydrophobic biomass: Effect of the organic phase-packing media ratio and the irrigation rate. <i>Chemical Engineering Journal</i> , 2014, 237, 162-168.	6.6	29
52	Anaerobic Digestion of Sugarcane Vinasse Through a Methanogenic UASB Reactor Followed by a Packed Bed Reactor. <i>Applied Biochemistry and Biotechnology</i> , 2017, 183, 1127-1145.	1.4	29
53	Two-liquid phase partitioning biotrickling filters for methane abatement: Exploring the potential of hydrophobic methanotrophs. <i>Journal of Environmental Management</i> , 2015, 151, 124-131.	3.8	28
54	Assessing the potential of purple phototrophic bacteria for the simultaneous treatment of piggery wastewater and upgrading of biogas. <i>Bioresource Technology</i> , 2019, 281, 10-17.	4.8	28

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55	Innovative operational strategies in photosynthetic biogas upgrading in an outdoors pilot scale algal-bacterial photobioreactor. <i>Chemosphere</i> , 2021, 264, 128470.	4.2	27
56	Valorization of CH <sub>4</sub> emissions into high-added-value products: Assessing the production of ectoine coupled with CH <sub>4</sub> abatement. <i>Journal of Environmental Management</i> , 2016, 182, 160-165.	3.8	25
57	Toluene biodegradation in an algal-bacterial airlift photobioreactor: Influence of the biomass concentration and of the presence of an organic phase. <i>Journal of Environmental Management</i> , 2016, 183, 585-593.	3.8	25
58	Integral approaches to wastewater treatment plant upgrading for odor prevention: Activated Sludge and Oxidized Ammonium Recycling. <i>Bioresource Technology</i> , 2015, 196, 685-693.	4.8	24
59	Comparative assessment of two biotrickling filters for siloxanes removal: Effect of the addition of an organic phase. <i>Chemosphere</i> , 2020, 251, 126359.	4.2	23
60	Recent advances in biological systems for improving indoor air quality. <i>Reviews in Environmental Science and Biotechnology</i> , 2021, 20, 363-387.	3.9	22
61	Performance evaluation of a control strategy for photosynthetic biogas upgrading in a semi-industrial scale photobioreactor. <i>Bioresource Technology</i> , 2020, 307, 123207.	4.8	20
62	Siloxanes removal in a two-phase partitioning biotrickling filter: Influence of the EBRT and the organic phase. <i>Renewable Energy</i> , 2021, 177, 52-60.	4.3	20
63	Syngas biomethanation: Current state and future perspectives. <i>Bioresource Technology</i> , 2022, 358, 127436.	4.8	20
64	A systematic comparison of ectoine production from upgraded biogas using <i>Methylomicrobium alcaliphilum</i> and a mixed haloalkaliphilic consortium. <i>Waste Management</i> , 2020, 102, 773-781.	3.7	19
65	Comparative Evaluation of Biogas Valorization into Electricity/Heat and Poly(hydroxyalkanoates) in Waste Treatment Plants: Assessing the Influence of Local Commodity Prices and Current Biotechnological Limitations. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 7701-7709.	3.2	18
66	Volatile Siloxanes Emissions: Impact and Sustainable Abatement Perspectives. <i>Trends in Biotechnology</i> , 2021, 39, 1245-1248.	4.9	17
67	Microbial community changes during different empty bed residence times and operational fluctuations in an air diffusion reactor for odor abatement. <i>Science of the Total Environment</i> , 2017, 590-591, 352-360.	3.9	16
68	Biogas Purification and Upgrading Technologies. <i>Biofuel and Biorefinery Technologies</i> , 2018, , 239-276.	0.1	16
69	Development of a control strategy to cope with biogas flowrate variations during photosynthetic biogas upgrading. <i>Biomass and Bioenergy</i> , 2019, 131, 105414.	2.9	16
70	Elucidating the influence of environmental factors on biogas-based polyhydroxybutyrate production by <i>Methylocystis hirsuta</i> CSC1. <i>Science of the Total Environment</i> , 2020, 706, 135136.	3.9	16
71	Influence of the diffuser type and liquid-to-biogas ratio on biogas upgrading performance in an outdoor pilot scale high rate algal pond. <i>Fuel</i> , 2020, 275, 117999.	3.4	16
72	Influence of biogas supply regime on photosynthetic biogas upgrading performance in an enclosed algal-bacterial photobioreactor. <i>Algal Research</i> , 2021, 57, 102350.	2.4	16

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73	Polyhydroxyalkanoates production from methane emissions in Sphagnum mosses: Assessing the effect of temperature and phosphorus limitation. <i>Science of the Total Environment</i> , 2019, 688, 684-690.	3.9	15
74	Optimization of photosynthetic biogas upgrading in closed photobioreactors combined with algal biomass production. <i>Journal of Water Process Engineering</i> , 2020, 38, 101554.	2.6	14
75	Ectoine Production from Biogas in Waste Treatment Facilities: A Techno-Economic and Sensitivity Analysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 17371-17380.	3.2	14
76	Deterioration of organic packing materials commonly used in air biofiltration: Effect of VOC-packing interactions. <i>Journal of Environmental Management</i> , 2014, 137, 93-100.	3.8	13
77	Effect of packing material configuration and liquid recirculation rate on the performance of a biotrickling filter treating VOCs. <i>Journal of Chemical Technology and Biotechnology</i> , 2018, 93, 2299-2306.	1.6	13
78	Nitrous Oxide Abatement Coupled with Biopolymer Production As a Model GHG Biorefinery for Cost-Effective Climate Change Mitigation. <i>Environmental Science &amp; Technology</i> , 2017, 51, 6319-6325.	4.6	12
79	Optimization of acrylic-styrene latex-based biofilms as a platform for biological indoor air treatment. <i>Chemosphere</i> , 2022, 287, 132182.	4.2	12
80	Recent trends and advances in biogas upgrading and methanotrophs-based valorization. <i>Chemical Engineering Journal Advances</i> , 2022, 11, 100325.	2.4	12
81	Biological treatment of gas pollutants in partitioning bioreactors. <i>Advances in Chemical Engineering</i> , 2019, 54, 239-274.	0.5	11
82	Integrated innovative biorefinery for the transformation of municipal solid waste into biobased products. , 2020, , 41-80.		11
83	Strategies for N2 and O2 removal during biogas upgrading in a pilot algal-bacterial photobioreactor. <i>Algal Research</i> , 2020, 48, 101920.	2.4	11
84	Biological conversion and revalorization of waste methane streams. <i>Critical Reviews in Environmental Science and Technology</i> , 2017, 47, 2133-2157.	6.6	10
85	Biogas treatment for H2S, CO2, and other contaminants removal. , 2020, , 153-176.		8
86	Toward a sustainable and cost-efficient biological-based platform for siloxanes removal. <i>Critical Reviews in Environmental Science and Technology</i> , 2023, 53, 70-86.	6.6	8
87	CH4-Based Polyhydroxyalkanoate Production: A Step Further Towards a Sustainable Bioeconomy. , 2019, , 283-321.		7
88	Comparative Performance Evaluation of Commercial Packing Materials for Malodorants Abatement in Biofiltration. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2966.	1.3	7
89	Evaluating odour control technologies using reliability and sustainability criteria “ a case study for water treatment plants. <i>Water Science and Technology</i> , 2014, 69, 1426-1433.	1.2	6
90	Harvesting microalgal-bacterial biomass from biogas upgrading process and evaluating the impact of flocculants on their growth during repeated recycling of the spent medium. <i>Algal Research</i> , 2020, 48, 101915.	2.4	6

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91	Potential of Microalgae for Wastewater Treatment and Its Valorization into Added Value Products. , 2019, , 281-315.		5
92	Biogas-based production of glycogen by Nostoc muscorum: Assessing the potential of transforming CO <sub>2</sub> into value added products. Chemosphere, 2021, 275, 129885.	4.2	5
93	Optimization of nitrogen feeding strategies for improving polyhydroxybutyrate production from biogas by Methylocystis parvus str. OBBP in a stirred tank reactor. Chemosphere, 2022, 299, 134443.	4.2	5
94	Assessing the influence of the carbon source on the abatement of industrial N <sub>2</sub> O emissions coupled with the synthesis of added-value bioproducts. Science of the Total Environment, 2017, 598, 765-771.	3.9	4
95	Quantitative analysis of methane monooxygenase (MMO) explains process robustness in continuous and feast-famine bioreactors treating methane. Chemosphere, 2018, 212, 319-329.	4.2	4
96	Lignocellulosic residue valorization in a sequential process of solid-state fermentation and solid substrate anaerobic digestion. Journal of Chemical Technology and Biotechnology, 2022, 97, 1575-1584.	1.6	4
97	AIR BIOFILTRATION APPLIED TO ODOR TREATMENT. , 2012, , 149-174.		3
98	Biogas upgrading using algal-bacterial processes. , 2017, , 283-304.		3
99	Trimethylamine abatement in algal-bacterial photobioreactors. Environmental Science and Pollution Research, 2020, 27, 9028-9037.	2.7	3
100	Technologies for the Bio-conversion of GHGs into High Added Value Products: Current State and Future Prospects. Green Energy and Technology, 2017, , 359-388.	0.4	2
101	A rapid regulation with different response intensities of the pmoA gene guarantees process robustness towards methane surges in continuous and feast-famine bioreactors. Biochemical Engineering Journal, 2019, 144, 193-197.	1.8	1
102	Sustainability and Robustness Assessment of Odor Control Technology at Water Treatment Plants. Proceedings of the Water Environment Federation, 2012, 2012, 108-122.	0.0	0
103	H <sub>2</sub> S Emissions from a Submerged Pilot-Scale Fixed Bed Biofilm Reactor. Clean - Soil, Air, Water, 2013, 41, 469-472.	0.7	0
104	Microalgae-Based Processes as an Energy Efficient Platform for Water Reclamation and Resource Recovery. Advances in Science, Technology and Innovation, 2020, , 95-97.	0.2	0