MarÃ-a L Cayuela

List of Publications by Year
in descending order

73 papers	7,310 citations	71097 41 h-index	85537 71 g-index
79 all docs	79 docs citations	79 times ranked	6820 citing authors

#	ARTICLE	IF	CITATIONS
1	Biochar's role in mitigating soil nitrous oxide emissions: A review and meta-analysis. Agriculture, Ecosystems and Environment, 2014, 191, 5-16.	5.3	746
2	An overview on olive mill wastes and their valorisation methods. Waste Management, 2006, 26, 960-969.	7.4	614
3	Biochar and denitrification in soils: when, how much and why does biochar reduce N2O emissions?. Scientific Reports, 2013, 3, 1732.	3.3	497
4	Biochar, soil and land-use interactions that reduce nitrate leaching and N2O emissions: A meta-analysis. Science of the Total Environment, 2019, 651, 2354-2364.	8.0	339
5	Feedstock choice, pyrolysis temperature and type influence biochar characteristics: a comprehensive meta-data analysis review. Biochar, 2020, 2, 421-438.	12.6	333
6	Role of biochar as an additive in organic waste composting. Bioresource Technology, 2018, 247, 1155-1164.	9.6	316
7	How biochar works, and when it doesn't: A review of mechanisms controlling soil and plant responses to biochar. GCB Bioenergy, 2021, 13, 1731-1764.	5.6	286
8	Biochar accelerates organic matter degradation and enhances N mineralisation during composting of poultry manure without a relevant impact on gas emissions. Bioresource Technology, 2015, 192, 272-279.	9.6	284
9	Biochar in climate change mitigation. Nature Geoscience, 2021, 14, 883-892.	12.9	263
10	Strategies for greenhouse gas emissions mitigation in Mediterranean agriculture: A review. Agriculture, Ecosystems and Environment, 2017, 238, 5-24.	5.3	193
11	Direct nitrous oxide emissions in Mediterranean climate cropping systems: Emission factors based on a meta-analysis of available measurement data. Agriculture, Ecosystems and Environment, 2017, 238, 25-35.	5.3	178
12	The molar H:Corg ratio of biochar is a key factor in mitigating N2O emissions from soil. Agriculture, Ecosystems and Environment, 2015, 202, 135-138.	5.3	164
13	Biochar improves N cycling during composting of olive mill wastes and sheep manure. Waste Management, 2016, 49, 553-559.	7.4	157
14	BIOCHAR AS A TOOL TO REDUCE THE AGRICULTURAL GREENHOUSE-GAS BURDEN â€“ KNOWNS, UNKNOWNS AND FUTURE RESEARCH NEEDS. Journal of Environmental Engineering and Landscape Management, 2017, 25, 114-139.	1.0	144
15	Short term effects of bioenergy by-products on soil C and N dynamics, nutrient availability and biochemical properties. Agriculture, Ecosystems and Environment, 2012, 160, 3-14.	5.3	142
16	Biochar in agriculture â€“ A systematic review of 26 global metaâ€analyses. GCB Bioenergy, 2021, 13, 1708-1730.	5.6	136
17	Mineralization dynamics and biochemical properties during initial decomposition of plant and animal residues in soil. Applied Soil Ecology, 2009, 41, 118-127.	4.3	134
18	The long-term role of organic amendments in building soil nutrient fertility: a meta-analysis and review. Nutrient Cycling in Agroecosystems, 2018, 111, 103-125.	2.2	129

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19	Residues of bioenergy production chains as soil amendments: Immediate and temporal phytotoxicity. Journal of Hazardous Materials, 2011, 186, 2017-2025.	12.4	126
20	Evaluation of two different aeration systems for composting two-phase olive mill wastes. Process Biochemistry, 2006, 41, 616-623.	3.7	121
21	Soil microbial biomass activation by trace amounts of readily available substrate. Biology and Fertility of Soils, 2006, 42, 542-549.	4.3	110
22	Greenhouse gas emissions from organic waste composting. Environmental Chemistry Letters, 2015, 13, 223-238.	16.2	103
23	Enhancing biochar redox properties through feedstock selection, metal preloading and post-pyrolysis treatments. Chemical Engineering Journal, 2020, 395, 125100.	12.7	99
24	Potential of olive mill waste and compost as biobased pesticides against weeds, fungi, and nematodes. Science of the Total Environment, 2008, 399, 11-18.	8.0	93
25	Soil application of meat and bone meal. Short-term effects on mineralization dynamics and soil biochemical and microbiological properties. Soil Biology and Biochemistry, 2008, 40, 462-474.	8.8	92
26	Chemical properties and hydrolytic enzyme activities for the characterisation of two-phase olive mill wastes composting. Bioresource Technology, 2008, 99, 4255-4262.	9.6	89
27	Fluorescein diacetate hydrolysis, respiration and microbial biomass in freshly amended soils. Biology and Fertility of Soils, 2008, 44, 885-890.	4.3	85
28	Agronomic Evaluation of Biochar, Compost and Biochar-Blended Compost across Different Cropping Systems: Perspective from the European Project FERTIPLUS. Agronomy, 2019, 9, 225.	3.0	72
29	Compost vs biochar amendment: a two-year field study evaluating soil C build-up and N dynamics in an organically managed olive crop. Plant and Soil, 2016, 408, 1-14.	3.7	68
30	Understanding, measuring and tuning the electrochemical properties of biochar for environmental applications. Reviews in Environmental Science and Biotechnology, 2017, 16, 695-715.	8.1	68
31	Interactive priming of soil N transformations from combining biochar and urea inputs: A 15N isotope tracer study. Soil Biology and Biochemistry, 2019, 131, 166-175.	8.8	60
32	The use of elemental sulphur as organic alternative to control pH during composting of olive mill wastes. Chemosphere, 2004, 57, 1099-1105.	8.2	54
33	Biochar reduces volatile organic compounds generated during chicken manure composting. Bioresource Technology, 2019, 288, 121584.	9.6	54
34	Bioenergy byâ€products as soil amendments? Implications for carbon sequestration and greenhouse gas emissions. GCB Bioenergy, 2010, 2, 201-213.	5.6	53
35	Composting Olive Mill Waste and Sheep Manure For Orchard Use. Compost Science and Utilization, 2004, 12, 130-136.	1.2	52
36	The mineralisation of fresh and humified soil organic matter by the soil microbial biomass. Waste Management, 2008, 28, 716-722.	7.4	51

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37	â€˜Bioenergy from cattle manure? <scp>I</scp>mplications of anaerobic digestion and subsequent pyrolysis for carbon and nitrogen dynamics in soilâ€™. GCB Bioenergy, 2012, 4, 751-760.	5.6	51
38	Biochemical changes and GHG emissions during composting of lignocellulosic residues with different N-rich by-products. Chemosphere, 2012, 88, 196-203.	8.2	49
39	Nitrous oxide and carbon dioxide emissions during initial decomposition of animal by-products applied as fertilisers to soils. Geoderma, 2010, 157, 235-242.	5.1	48
40	Two-phase olive mill waste composting: enhancement of the composting rate and compost quality by grape stalks addition. Biodegradation, 2010, 21, 465-473.	3.0	45
41	Plant and animal wastes composting: Effects of the N source on process performance. Bioresource Technology, 2009, 100, 3097-3106.	9.6	44
42	Biochar increases soil N2O emissions produced by nitrification-mediated pathways. Frontiers in Environmental Science, 2014, 2, .	3.3	42
43	Potential of olive mill wastes for soil C sequestration. Waste Management, 2008, 28, 767-773.	7.4	40
44	Duckweed (Lemna gibba) growth inhibition bioassay for evaluating the toxicity of olive mill wastes before and during composting. Chemosphere, 2007, 68, 1985-1991.	8.2	39
45	Matrix effect on the performance of headspace solid phase microextraction method for the analysis of target volatile organic compounds (VOCs) in environmental samples. Chemosphere, 2013, 93, 2311-2318.	8.2	32
46	Greenhouse gas emissions and carbon sink capacity of amended soils evaluated under laboratory conditions. Soil Biology and Biochemistry, 2007, 39, 1366-1374.	8.8	31
47	Biochar reduces the efficiency of nitrification inhibitor 3,4-dimethylpyrazole phosphate (DMPP) mitigating N2O emissions. Scientific Reports, 2019, 9, 2346.	3.3	31
48	Modification of the RothC model to simulate soil C mineralization of exogenous organic matter. Biogeosciences, 2017, 14, 3253-3274.	3.3	29
49	A simple automated system for measuring soil respiration by gas chromatography. Talanta, 2010, 81, 849-855.	5.5	25
50	High concentrations of polycyclic aromatic hydrocarbons (naphthalene, phenanthrene and pyrene) failed to explain biochar's capacity to reduce soil nitrous oxide emissions. Environmental Pollution, 2015, 196, 72-77.	7.5	25
51	Nitrogen dynamics in cropping systems under Mediterranean climate: a systemic analysis. Environmental Research Letters, 2021, 16, 073002.	5.2	25
52	Biochars from Mediterranean Agroindustry Residues: Physicochemical Properties Relevant for C Sequestration and Soil Water Retention. ACS Sustainable Chemistry and Engineering, 2019, 7, 4724-4733.	6.7	21
53	Relationships between emitted volatile organic compounds and their concentration in the pile during municipal solid waste composting. Waste Management, 2018, 79, 179-187.	7.4	20
54	Overcoming biochar limitations to remediate pentachlorophenol in soil by modifying its electrochemical properties. Journal of Hazardous Materials, 2022, 426, 127805.	12.4	20

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55	Biochar research activities and their relation to development and environmental quality. A meta-analysis. Agronomy for Sustainable Development, 2017, 37, 1.	5.3	17
56	Suitability of Different Agricultural and Urban Organic Wastes as Feedstocks for the Production of Biocharâ€"Part 1: Physicochemical Characterisation. Sustainability, 2018, 10, 2265.	3.2	17
57	Compost biochemical quality mediates nitrogen leaching loss in a greenhouse soil under vegetable cultivation. Geoderma, 2020, 358, 113984.	5.1	17
58	Greenhouse Gas from Organic Waste Composting: Emissions and Measurement. Environmental Chemistry for A Sustainable World, 2015, , 33-70.	0.5	16
59	Linking biochars properties to their capacity to modify aerobic CH4 oxidation in an upland agricultural soil. Geoderma, 2020, 363, 114179.	5.1	16
60	Biochar as electron donor for reduction of N2O by Paracoccus denitrificans. FEMS Microbiology Ecology, 2020, 96, .	2.7	14
61	Biochar for Climate Change Mitigation. , 2018, , 219-248.		12
62	Suitability of Different Agricultural and Urban Organic Wastes as Feedstocks for the Production of Biocharâ€"Part 2: Agronomical Evaluation as Soil Amendment. Sustainability, 2018, 10, 2077.	3.2	11
63	Tracking C and N dynamics and stabilization in soil amended with wheat residue and its corresponding bioethanol byâ€product: a ¹³C/¹⁵N study. GCB Bioenergy, 2014, 6, 499-508.	5.6	10
64	Soil C Storage Potential of Exogenous Organic Matter at Regional Level (Italy) Under Climate Change Simulated by RothC Model Modified for Amended Soils. Frontiers in Environmental Science, 2018, 6, .	3.3	10
65	N2O emissions during Brassica oleracea cultivation: Interaction of biochar with mineral and organic fertilization. European Journal of Agronomy, 2020, 115, 126021.	4.1	8
66	Olive tree pruning derived biochar increases glucosinolate concentrations in broccoli. Scientia Horticulturae, 2020, 267, 109329.	3.6	7
67	Paracetamol degradation pathways in soil after biochar addition. Environmental Pollution, 2022, 307, 119546.	7.5	7
68	Influence of Pyrolyzed Grape-Seeds/Sewage Sludge Blends on the Availability of P, Fe, Cu, As and Cd to Maize. Agronomy, 2019, 9, 406.	3.0	6
69	Editorial: Interactive Feedbacks Between Soil Fauna and Soil Processes. Frontiers in Environmental Science, 2020, 8, .	3.3	6
70	Carbon mineralization dynamics in soils amended with meat meals under laboratory conditions. Waste Management, 2008, 28, 707-715.	7.4	3
71	Biochar Improves the Properties of Poultry Manure Compost as Growing Media for Rosemary Production. Agronomy, 2020, 10, 261.	3.0	3
72	Dynamics of Carbon Mineralization and Biochemical Properties Following Application of Organic Residues to Soil. , 2007, , .		0

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73	Biochar as an additive in composting: impact on process performance and on the agronomical quality of the end product. Acta Horticulturae, 2021, , 175-188.	0.2	0