

Wood-Derived Black Carbon (Biochar) as a Microbial Ele

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Insoluble/immobilized redox mediators for catalyzing anaerobic bio-reduction of contaminants. <i>Reviews in Environmental Science and Biotechnology</i> , 2016, 15, 379-409.	3.9	32
2	The electron donating capacity of biochar is dramatically underestimated. <i>Scientific Reports</i> , 2016, 6, 32870.	1.6	106
3	Hardwiring microbes via direct interspecies electron transfer: mechanisms and applications. <i>Environmental Sciences: Processes and Impacts</i> , 2016, 18, 968-980.	1.7	143
5	Biochar interferes with kiwifruit Fe-nutrition in calcareous soil. <i>Geoderma</i> , 2016, 272, 10-19.	2.3	29
6	The role of biochar properties in influencing the sorption and desorption of Pb(II), Cd(II) and As(III) in aqueous solution. <i>Journal of Cleaner Production</i> , 2017, 148, 127-136.	4.6	228
7	Effect of Heavy Metal (Zn) on Redox Property of Hydrochar Produced from Lignin, Cellulose, and Xylose. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 3499-3508.	3.2	33
8	Photogeneration of reactive oxygen species from biochar suspension for diethyl phthalate degradation. <i>Applied Catalysis B: Environmental</i> , 2017, 214, 34-45.	10.8	247
9	Improved contaminant removal in vegetated stormwater biofilters amended with biochar. <i>Environmental Science: Water Research and Technology</i> , 2017, 3, 726-734.	1.2	52
10	Influence of surface chemistry of carbon materials on their interactions with inorganic nitrogen contaminants in soil and water. <i>Chemosphere</i> , 2017, 184, 532-547.	4.2	42
11	Understanding, measuring and tuning the electrochemical properties of biochar for environmental applications. <i>Reviews in Environmental Science and Biotechnology</i> , 2017, 16, 695-715.	3.9	68
12	Yield-scaled N ₂ O emissions were effectively reduced by biochar amendment of sandy loam soil under maize - wheat rotation in the North China Plain. <i>Atmospheric Environment</i> , 2017, 170, 58-70.	1.9	51
13	Activity and Reactivity of Pyrogenic Carbonaceous Matter toward Organic Compounds. <i>Environmental Science & Technology</i> , 2017, 51, 8893-8908.	4.6	213
14	Redox-Active Oxygen-Containing Functional Groups in Activated Carbon Facilitate Microbial Reduction of Ferrihydrite. <i>Environmental Science & Technology</i> , 2017, 51, 9709-9717.	4.6	113
15	Multifunctional Biochar for Highly Efficient Capture, Identification, and Removal of Toxic Metals and Superbugs from Water Samples. <i>ACS Omega</i> , 2017, 2, 7730-7738.	1.6	30
16	Black Carbon (Biochar) In Water/Soil Environments: Molecular Structure, Sorption, Stability, and Potential Risk. <i>Environmental Science & Technology</i> , 2017, 51, 13517-13532.	4.6	441
17	Applications of biochar in redox-mediated reactions. <i>Bioresource Technology</i> , 2017, 246, 271-281.	4.8	322
18	Does soil aging affect the N ₂ O mitigation potential of biochar? A combined microcosm and field study. <i>GCB Bioenergy</i> , 2017, 9, 953-964.	2.5	65
19	Microbial and Plant-Assisted Bioremediation of Heavy Metal Polluted Environments: A Review. <i>International Journal of Environmental Research and Public Health</i> , 2017, 14, 1504.	1.2	685

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20	Biochar Addition Increases the Rates of Dissimilatory Iron Reduction and Methanogenesis in Ferrihydrite Enrichments. <i>Frontiers in Microbiology</i> , 2017, 8, 589.	1.5	31
21	Persistent free radicals in carbon-based materials on transformation of refractory organic contaminants (ROCs) in water: A critical review. <i>Water Research</i> , 2018, 137, 130-143.	5.3	255
22	Recent progress in biochar-supported photocatalysts: synthesis, role of biochar, and applications. <i>RSC Advances</i> , 2018, 8, 14237-14248.	1.7	171
23	Plenty of room for carbon on the ground: Potential applications of biochar for stormwater treatment. <i>Science of the Total Environment</i> , 2018, 625, 1644-1658.	3.9	165
24	Characterization of biochar derived from rice husks and its potential in chlorobenzene degradation. <i>Carbon</i> , 2018, 130, 730-740.	5.4	179
25	Surface-promoted hydrolysis of 2,4,6-trinitrotoluene and 2,4-dinitroanisole on pyrogenic carbonaceous matter. <i>Chemosphere</i> , 2018, 197, 603-610.	4.2	14
26	Loop bioenergy production and carbon sequestration of polymeric waste by integrating biochemical and thermochemical conversion processes: A conceptual framework and recent advances. <i>Renewable Energy</i> , 2018, 124, 202-211.	4.3	48
27	Sorption, desorption and degradation of neonicotinoids in four agricultural soils and their effects on soil microorganisms. <i>Science of the Total Environment</i> , 2018, 615, 59-69.	3.9	148
28	Redox-active reactions in denitrification provided by biochars pyrolyzed at different temperatures. <i>Science of the Total Environment</i> , 2018, 615, 1547-1556.	3.9	82
29	Prominent Conductor Mechanism-Induced Electron Transfer of Biochar Produced by Pyrolysis of Nickel-Enriched Biomass. <i>Catalysts</i> , 2018, 8, 573.	1.6	4
30	Chemical methods for determining the electron storage capacity of black carbon. <i>MethodsX</i> , 2018, 5, 1515-1520.	0.7	8
31	Environmental transformation of natural and engineered carbon nanoparticles and implications for the fate of organic contaminants. <i>Environmental Science: Nano</i> , 2018, 5, 2500-2518.	2.2	54
32	Biochar Amendment to Soil for Sustainable Agriculture. <i>Sustainable Agriculture Reviews</i> , 2018, , 207-227.	0.6	3
33	Development of a novel chem-bio hybrid process using biochar supported nanoscale iron sulfide composite and <i>Corynebacterium variabile</i> HRJ4 for enhanced trichloroethylene dechlorination. <i>Water Research</i> , 2018, 147, 132-141.	5.3	41
34	Biochar Modulates Methanogenesis through Electron Syntrophy of Microorganisms with Ethanol as a Substrate. <i>Environmental Science & Technology</i> , 2018, 52, 12198-12207.	4.6	172
35	Identifying the reducing capacity of biomass derived hydrochar with different post-treatment methods. <i>Science of the Total Environment</i> , 2018, 643, 486-495.	3.9	30
36	Simultaneous Quantification of Electron Transfer by Carbon Matrices and Functional Groups in Pyrogenic Carbon. <i>Environmental Science & Technology</i> , 2018, 52, 8538-8547.	4.6	95
37	Wood-Biochar-Supported Magnetite Nanoparticles for Remediation of PAH-Contaminated Estuary Sediment. <i>Catalysts</i> , 2018, 8, 73.	1.6	79

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38	Amending anaerobic bioreactors with pyrogenic carbonaceous materials: the influence of material properties on methane generation. <i>Environmental Science: Water Research and Technology</i> , 2018, 4, 1794-1806.	1.2	20
39	Characterization and quantification of electron donating capacity and its structure dependence in biochar derived from three waste biomasses. <i>Chemosphere</i> , 2018, 211, 1073-1081.	4.2	127
40	Enhanced removal of Cr(VI) by biochar with Fe as electron shuttles. <i>Journal of Environmental Sciences</i> , 2019, 78, 109-117.	3.2	42
41	pH Dependence of Arsenic Oxidation by Rice-Husk-Derived Biochar: Roles of Redox-Active Moieties. <i>Environmental Science & Technology</i> , 2019, 53, 9034-9044.	4.6	175
42	Electroactive Biochar for Large-Scale Environmental Applications of Microbial Electrochemistry. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 18198-18212.	3.2	46
43	The impact of biochar on soil carbon sequestration: Meta-analytical approach to evaluating environmental and economic advantages. <i>Journal of Environmental Management</i> , 2019, 250, 109466.	3.8	86
44	Study on the degradation of accumulated bisphenol S and regeneration of magnetic sludge-derived biochar upon microwave irradiation in the presence of hydrogen peroxide for application in integrated process. <i>Bioresource Technology</i> , 2019, 293, 122072.	4.8	28
45	Biochar enhanced microbial degradation of 17 β -estradiol. <i>Environmental Sciences: Processes and Impacts</i> , 2019, 21, 1736-1744.	1.7	10
46	Ability of biochar to facilitate anaerobic digestion is restricted to stressed surroundings. <i>Journal of Cleaner Production</i> , 2019, 238, 117959.	4.6	44
47	Simultaneous mercury oxidation and NO reduction in a membrane biofilm reactor. <i>Science of the Total Environment</i> , 2019, 658, 1465-1474.	3.9	20
48	Probing the Surface Reactivity of Pyrogenic Carbonaceous Material (PCM) through Synthesis of PCM-Like Conjugated Microporous Polymers. <i>Environmental Science & Technology</i> , 2019, 53, 7673-7682.	4.6	16
49	Pyrolysis-temperature depended quinone and carbonyl groups as the electron accepting sites in barley grass derived biochar. <i>Chemosphere</i> , 2019, 232, 273-280.	4.2	82
50	Interaction with low molecular weight organic acids affects the electron shuttling of biochar for Cr(VI) reduction. <i>Journal of Hazardous Materials</i> , 2019, 378, 120705.	6.5	90
51	The synergistic interaction between sulfate-reducing bacteria and pyrogenic carbonaceous matter in DDT decay. <i>Chemosphere</i> , 2019, 233, 252-260.	4.2	6
52	Biochar-Mediated Anaerobic Oxidation of Methane. <i>Environmental Science & Technology</i> , 2019, 53, 6660-6668.	4.6	92
53	Accelerated Microbial Reduction of Azo Dye by Using Biochar from Iron-Rich-Biomass Pyrolysis. <i>Materials</i> , 2019, 12, 1079.	1.3	11
54	Experimental Validation of Hydrogen Atom Transfer Gibbs Free Energy as a Predictor of Nitroaromatic Reduction Rate Constants. <i>Environmental Science & Technology</i> , 2019, 53, 5816-5827.	4.6	17
55	Effect of Pyrolysis Temperature on Acidic Oxygen-Containing Functional Groups and Electron Storage Capacities of Pyrolyzed Hydrochars. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 8387-8396.	3.2	47

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56	Reduced depth stacked constructed wetlands for enhanced urban wastewater treatment. <i>Chemical Engineering Journal</i> , 2019, 372, 708-714.	6.6	18
57	Colonization and growth of dehalorespiring biofilms on carbonaceous sorptive amendments. <i>Biofouling</i> , 2019, 35, 50-58.	0.8	7
58	Effects of Land Use and Restoration on Soil Microbial Communities. <i>Advances in Environmental Microbiology</i> , 2019, , 173-242.	0.1	4
59	Biochar's role as an electron shuttle for mediating soil N ₂ O emissions. <i>Soil Biology and Biochemistry</i> , 2019, 133, 94-96.	4.2	61
60	Influence of graphene oxide and biochar on anaerobic degradation of petroleum hydrocarbons. <i>Journal of Bioscience and Bioengineering</i> , 2019, 128, 72-79.	1.1	27
61	Biochar mediates activation of aged nanoscale ZVI by <i>Shewanella putrefaciens</i> CN32 to enhance the degradation of Pentachlorophenol. <i>Chemical Engineering Journal</i> , 2019, 368, 148-156.	6.6	44
62	Electroactive biochar outperforms highly conductive carbon materials for biodegrading pollutants by enhancing microbial extracellular electron transfer. <i>Carbon</i> , 2019, 146, 597-609.	5.4	79
63	The use of biochar in animal feeding. <i>PeerJ</i> , 2019, 7, e7373.	0.9	101
64	A comprehensive review on physical activation of biochar for energy and environmental applications. <i>Reviews in Chemical Engineering</i> , 2019, 35, 735-776.	2.3	210
65	Cotransport of biochar and <i>Shewanella oneidensis</i> MR-1 in saturated porous media: Impacts of electrostatic interaction, extracellular electron transfer and microbial taxis. <i>Science of the Total Environment</i> , 2019, 658, 95-104.	3.9	25
66	Facile fabrication of <i>Shewanella</i> @graphene core-shell material and its enhanced performance in nitrobenzene reduction. <i>Science of the Total Environment</i> , 2019, 658, 324-332.	3.9	10
67	Highly efficient nitrate removal in a heterotrophic denitrification system amended with redox-active biochar: A molecular and electrochemical mechanism. <i>Bioresource Technology</i> , 2019, 275, 297-306.	4.8	115
68	Enhanced ethanol production from syngas by <i>Clostridium ragsdalei</i> in continuous stirred tank reactor using medium with poultry litter biochar. <i>Applied Energy</i> , 2019, 236, 1269-1279.	5.1	37
69	A pilot-scale, bi-layer bioretention system with biochar and zero-valent iron for enhanced nitrate removal from stormwater. <i>Water Research</i> , 2019, 148, 378-387.	5.3	114
70	New methods for assessing electron storage capacity and redox reversibility of biochar. <i>Chemosphere</i> , 2019, 215, 827-834.	4.2	45
71	Easily mineralizable carbon in manure-based biochar added to a soil influences N ₂ O emissions and microbial N cycling genes. <i>Land Degradation and Development</i> , 2019, 30, 406-416.	1.8	21
72	Bio-inspired and biomaterials-based hybrid photocatalysts for environmental detoxification: A review. <i>Chemical Engineering Journal</i> , 2020, 382, 122937.	6.6	201
73	Biochar facilitated bioprocessing and biorefinery for productions of biofuel and chemicals: A review. <i>Bioresource Technology</i> , 2020, 295, 122252.	4.8	97

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74	Chemical and biological immobilization mechanisms of potentially toxic elements in biochar-amended soils. <i>Critical Reviews in Environmental Science and Technology</i> , 2020, 50, 903-978.	6.6	157
75	Biochar as simultaneous shelter, adsorbent, pH buffer, and substrate of <i>Pseudomonas citronellolis</i> to promote biodegradation of high concentrations of phenol in wastewater. <i>Water Research</i> , 2020, 172, 115494.	5.3	151
76	Redox-based electron exchange capacity of biowaste-derived biochar accelerates syntrophic phenol oxidation for methanogenesis via direct interspecies electron transfer. <i>Journal of Hazardous Materials</i> , 2020, 390, 121726.	6.5	91
77	Redox-active biochar facilitates potential electron transfer between syntrophic partners to enhance anaerobic digestion under high organic loading rate. <i>Bioresource Technology</i> , 2020, 298, 122524.	4.8	66
78	Pyrolysis-temperature depended electron donating and mediating mechanisms of biochar for Cr(VI) reduction. <i>Journal of Hazardous Materials</i> , 2020, 388, 121794.	6.5	103
79	Mercury in rice paddy fields and how does some agricultural activities affect the translocation and transformation of mercury - A critical review. <i>Ecotoxicology and Environmental Safety</i> , 2020, 202, 110950.	2.9	53
80	Reaction of Substituted Phenols with Lignin Char: Dual Oxidative and Reductive Pathways Depending on Substituents and Conditions. <i>Environmental Science & Technology</i> , 2020, 54, 15811-15820.	4.6	21
81	Comprehensive comparison of microalgae-derived biochar from different feedstocks: A prospective study for future environmental applications. <i>Algal Research</i> , 2020, 52, 102103.	2.4	54
82	Anammox process dosed with biochars for enhanced nitrogen removal: Role of surface functional groups. <i>Science of the Total Environment</i> , 2020, 748, 141367.	3.9	47
83	Co-application of a biochar and an electric potential accelerates soil nitrate removal while decreasing N ₂ O emission. <i>Soil Biology and Biochemistry</i> , 2020, 149, 107946.	4.2	12
84	Enhancing peroxydisulfate activation of Fe-Al layered double hydroxide by dissolved organic matter: Performance and mechanism. <i>Water Research</i> , 2020, 185, 116246.	5.3	74
85	Mechanisms for sulfide-induced nitrobenzene reduction mediated by a variety of different carbonaceous materials: Graphitized carbon facilitated electron transfer versus quinone facilitated formation of reactive sulfur species. <i>Journal of Environmental Quality</i> , 2020, 49, 1564-1574.	1.0	6
86	Synthesis and Structural Studies of Manganese Ferrite and Zinc Ferrite Nanocomposites and Their Use as Photoadsorbents for Indigo Carmine and Methylene Blue Dyes. <i>ACS Omega</i> , 2020, 5, 32386-32394.	1.6	27
87	Development of Human Host Defense Antimicrobial Peptide-Conjugated Biochar Nanocomposites for Combating Broad-Spectrum Superbugs. <i>ACS Applied Bio Materials</i> , 2020, 3, 7696-7705.	2.3	6
88	Promoting mechanism of electronic shuttle for bioavailability of Fe(III) oxide and its environmental significance. <i>Water Science and Technology: Water Supply</i> , 2020, 20, 1157-1166.	1.0	2
89	Biochar alters nitrogen and phosphorus dynamics in a western rangeland ecosystem. <i>Soil Biology and Biochemistry</i> , 2020, 148, 107868.	4.2	34
90	Removal mechanisms of Cr(VI) and Cr(III) by biochar supported nanosized zero-valent iron: Synergy of adsorption, reduction and transformation. <i>Environmental Pollution</i> , 2020, 265, 115018.	3.7	142
91	Visualizing the distribution of black carbon's electron storage capacity using silver. <i>MethodsX</i> , 2020, 7, 100838.	0.7	2

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92	Biochar based catalysts for the abatement of emerging pollutants: A review. Chemical Engineering Journal, 2020, 394, 124856.	6.6	129
93	Effects of biochar-based controlled release nitrogen fertilizer on nitrogen-use efficiency of oilseed rape (<i>Brassica napus</i> L.). Scientific Reports, 2020, 10, 11063.	1.6	81
94	Methane production from antibiotic bearing swine wastewater using carbon-based materials as electrons' conduits during anaerobic digestion. International Journal of Energy Research, 2020, 44, 10996-11005.	2.2	12
95	Visualizing electron storage capacity distribution in biochar through silver tagging. Chemosphere, 2020, 248, 125952.	4.2	10
96	Using wood flour waste to produce biochar as the support to enhance the visible-light photocatalytic performance of BiOBr for organic and inorganic contaminants removal. Chemosphere, 2020, 250, 126291.	4.2	58
97	Bone Char Mediated Dechlorination of Trichloroethylene by Green Rust. Environmental Science & Technology, 2020, 54, 3643-3652.	4.6	44
98	Nanoactivated Carbon Reduces Mercury Mobility and Uptake by <i>Oryza sativa</i> L.: Mechanistic Investigation Using Spectroscopic and Microscopic Techniques. Environmental Science & Technology, 2020, 54, 2698-2706.	4.6	45
99	Toxic effects of engineered carbon nanoparticles on environment. , 2020, , 237-260.		8
100	Enhancing methanogenesis from anaerobic digestion of propionate with addition of Fe oxides supported on conductive carbon cloth. Bioresource Technology, 2020, 302, 122796.	4.8	48
101	Simultaneous adsorption and oxidation of antimonite onto nano zero-valent iron sludge-based biochar: Indispensable role of reactive oxygen species and redox-active moieties. Journal of Hazardous Materials, 2020, 391, 122057.	6.5	88
102	Sustainable remediation with an electroactive biochar system: mechanisms and perspectives. Green Chemistry, 2020, 22, 2688-2711.	4.6	109
103	Biochar-augmented biofilters to improve pollutant removal from stormwater " can they improve receiving water quality?. Environmental Science: Water Research and Technology, 2020, 6, 1520-1537.	1.2	37
104	Biochar acting as an electron acceptor reduces nitrate removal in woodchip denitrifying bioreactors. Ecological Engineering, 2020, 149, 105724.	1.6	11
105	Biochar and GAC intensify anaerobic phenol degradation via distinctive adsorption and conductive properties. Journal of Hazardous Materials, 2021, 405, 124183.	6.5	53
106	The reduction of nitrobenzene by extracellular electron transfer facilitated by Fe-bearing biochar derived from sewage sludge. Journal of Hazardous Materials, 2021, 403, 123682.	6.5	56
107	Oxidative transformation of 1-naphthylamine in water mediated by different environmental black carbons. Journal of Hazardous Materials, 2021, 403, 123594.	6.5	5
108	Microbial community shift via black carbon: Insight into biological nitrogen removal from microbial assemblage and functional patterns. Environmental Research, 2021, 192, 110266.	3.7	33
109	The contribution of lignocellulosic constituents to Cr(VI) reduction capacity of biochar-supported zerovalent iron. Chemosphere, 2021, 263, 127871.	4.2	34

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110	Designing sustainable drainage systems in subtropical cities: Challenges and opportunities. <i>Journal of Cleaner Production</i> , 2021, 280, 124418.	4.6	22
111	Organoarsenic conversion to As(III) in subcritical hydrothermal reaction of livestock manure. <i>Journal of Hazardous Materials</i> , 2021, 402, 123571.	6.5	15
112	Biochar catalyzed dechlorination – Which biochar properties matter?. <i>Journal of Hazardous Materials</i> , 2021, 406, 124724.	6.5	28
113	The role of humic substances in mitigating greenhouse gases emissions: Current knowledge and research gaps. <i>Science of the Total Environment</i> , 2021, 750, 141677.	3.9	46
114	Degradation of anthraquinone dye reactive blue 19 using persulfate activated with Fe/Mn modified biochar: Radical/non-radical mechanisms and fixed-bed reactor study. <i>Science of the Total Environment</i> , 2021, 758, 143584.	3.9	70
115	Sediment-based biochar facilitates highly efficient nitrate removal: Physicochemical properties, biological responses and potential mechanism. <i>Chemical Engineering Journal</i> , 2021, 405, 126645.	6.6	36
116	The overlooked role of carbonaceous supports in enhancing arsenite oxidation and removal by nZVI: Surface area versus electrochemical property. <i>Chemical Engineering Journal</i> , 2021, 406, 126851.	6.6	68
117	Efficient nitrate removal by <i>Pseudomonas mendocina</i> GL6 immobilized on biochar. <i>Bioresource Technology</i> , 2021, 320, 124324.	4.8	41
118	Biochar-impacted sulfur cycling affects methylmercury phytoavailability in soils under different redox conditions. <i>Journal of Hazardous Materials</i> , 2021, 407, 124397.	6.5	21
119	Application of biochars in the remediation of chromium contamination: Fabrication, mechanisms, and interfering species. <i>Journal of Hazardous Materials</i> , 2021, 407, 124376.	6.5	93
120	Development of biomass-derived biochar for agronomic and environmental remediation applications. <i>Biomass Conversion and Biorefinery</i> , 2021, 11, 339-361.	2.9	23
121	Revealing the Mechanism of Biochar Enhancing the Production of Medium Chain Fatty Acids from Waste Activated Sludge Alkaline Fermentation Liquor. <i>ACS ES&T Water</i> , 2021, 1, 1014-1024.	2.3	28
122	Bioretention for removal of nitrogen: processes, operational conditions, and strategies for improvement. <i>Environmental Science and Pollution Research</i> , 2021, 28, 10519-10535.	2.7	20
123	Interventions to Ameliorate Heavy Metal Contaminated Soils Employing Fungal Siderophores. <i>Fungal Biology</i> , 2021, , 79-98.	0.3	0
124	Simultaneous adsorption and biodegradation of trichloroethylene occurs in a biochar packed column treating contaminated landfill leachate. <i>Journal of Hazardous Materials</i> , 2021, 403, 123676.	6.5	28
125	Hydrologic characteristics and nitrogen removal performance by different formulated soil medium of bioretention system. <i>Journal of Cleaner Production</i> , 2021, 290, 125873.	4.6	15
127	Biochar with large specific surface area recruits N ₂ O-reducing microbes and mitigate N ₂ O emission. <i>Soil Biology and Biochemistry</i> , 2021, 156, 108212.	4.2	47
128	Stormwater Treatment Effectiveness of Established Lined Bioretention Facilities in Portland, Oregon. <i>Journal of Sustainable Water in the Built Environment</i> , 2021, 7, .	0.9	7

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129	Developing microbial communities containing a high abundance of exoelectrogenic microorganisms using activated carbon granules. <i>Science of the Total Environment</i> , 2021, 768, 144361.	3.9	10
130	Pyrolysis Creates Electron Storage Capacity of Black Carbon (Biochar) from Lignocellulosic Biomass. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 6821-6831.	3.2	19
131	Transformation of Antimonate at the Biochar-Solution Interface. <i>ACS ES&T Water</i> , 2021, 1, 2029-2036.	2.3	10
132	Dynamics of methane emission and archaeal microbial community in paddy soil amended with different types of biochar. <i>Applied Soil Ecology</i> , 2021, 162, 103892.	2.1	15
133	Association of biochar properties with changes in soil bacterial, fungal and fauna communities and nutrient cycling processes. <i>Biochar</i> , 2021, 3, 239-254.	6.2	112
134	Biochar for remediation of agrochemicals and synthetic organic dyes from environmental samples: A review. <i>Chemosphere</i> , 2021, 272, 129917.	4.2	57
135	Redox Properties of Pyrogenic Dissolved Organic Matter (pyDOM) from Biomass-Derived Chars. <i>Environmental Science & Technology</i> , 2021, 55, 11434-11444.	4.6	21
136	Suppressing peatland methane production by electron snorkeling through pyrogenic carbon in controlled laboratory incubations. <i>Nature Communications</i> , 2021, 12, 4119.	5.8	21
137	Biochar porosity: a nature-based dependent parameter to deliver microorganisms to soils for land restoration. <i>Environmental Science and Pollution Research</i> , 2021, 28, 46894-46909.	2.7	15
138	Improvement of electron transfer efficiency during denitrification process by Fe-Pd/multi-walled carbon nanotubes: Possessed redox characteristics and secreted endogenous electron mediator. <i>Science of the Total Environment</i> , 2021, 781, 146686.	3.9	76
139	Abiotic reductive removal of organic contaminants catalyzed by carbon materials: A short review. <i>Water Environment Research</i> , 2021, 93, 2374-2390.	1.3	0
140	Enhancing peroxymonosulfate activation by Co-Fe layered double hydroxide catalysts via compositing with biochar. <i>Chemical Engineering Journal</i> , 2021, 417, 129111.	6.6	92
141	Biochar based nanocomposites for photocatalytic degradation of emerging organic pollutants from water and wastewater. <i>Materials Research Bulletin</i> , 2021, 140, 111262.	2.7	86
142	Effects of black carbon-based thin-layer capping for nitrogen-overloaded sediment remediation on microbial community assembly. <i>Science of the Total Environment</i> , 2021, 788, 147888.	3.9	2
143	The anaerobic oxidation of methane in paddy soil by ferric iron and nitrate, and the microbial communities involved. <i>Science of the Total Environment</i> , 2021, 788, 147773.	3.9	35
144	Biological nitrogen removal from stormwater in bioretention cells: a critical review. <i>Critical Reviews in Biotechnology</i> , 2022, 42, 713-735.	5.1	14
145	Combined microbial transcript and metabolic analysis reveals the different roles of hydrochar and biochar in promoting anaerobic digestion of waste activated sludge. <i>Water Research</i> , 2021, 205, 117679.	5.3	63
146	Enhanced trichloroethylene biodegradation: Roles of biochar-microbial collaboration beyond adsorption. <i>Science of the Total Environment</i> , 2021, 792, 148451.	3.9	36

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147	Effects of feedstock and pyrolysis temperature of biochar on promoting hydrogen production of ethanol-type fermentation. <i>Science of the Total Environment</i> , 2021, 790, 148206.	3.9	37
148	A critical review on the application of biochar in environmental pollution remediation: Role of persistent free radicals (PFRs). <i>Journal of Environmental Sciences</i> , 2021, 108, 201-216.	3.2	76
149	Insight into the synergistic effects of conductive biochar for accelerating maturation during electric field-assisted aerobic composting. <i>Bioresource Technology</i> , 2021, 337, 125359.	4.8	29
150	Electrochemical behaviors of biochar materials during pollutant removal in wastewater: A review. <i>Chemical Engineering Journal</i> , 2021, 425, 130585.	6.6	26
151	Anaerobic bacterial responses to carbonaceous materials and implications for contaminant transformation: Cellular, metabolic, and community level findings. <i>Bioresource Technology</i> , 2021, 341, 125738.	4.8	10
152	Reactivity of chloroacetamides toward sulfide and black carbon: Insights from structural analogues and dynamic NMR spectroscopy. <i>Science of the Total Environment</i> , 2022, 803, 150064.	3.9	3
153	Biochar as a novel carbon-negative electron source and mediator: electron exchange capacity (EEC) and environmentally persistent free radicals (EPFRs): a review. <i>Chemical Engineering Journal</i> , 2022, 429, 132313.	6.6	65
154	Biochar-based bioretention systems for removal of chemical and microbial pollutants from stormwater: A critical review. <i>Journal of Hazardous Materials</i> , 2022, 422, 126886.	6.5	55
155	Biologically Produced Methane as a Renewable Energy Source. <i>Advances in Applied Microbiology</i> , 2016, 97, 1-61.	1.3	95
156	Poorly conductive biochar boosting extracellular electron transfer for efficient volatile fatty acids oxidation via redox-mediated mechanism. <i>Science of the Total Environment</i> , 2022, 809, 151113.	3.9	15
157	Preparation and Characterization of Magnetic Banana Peels Biochar for Fenton Degradation of Methylene Blue. <i>Materials Sciences and Applications</i> , 2020, 11, 382-400.	0.3	7
158	Biogenic formation of amorphous carbon by anaerobic methanotrophs and select methanogens. <i>Science Advances</i> , 2021, 7, eabg9739.	4.7	8
159	Use of Extracellular Polymeric Substances as Natural Redox Mediators to Enhance Denitrification Performance by Accelerating Electron Transfer and Carbon Source Metabolism. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
161	Powering biological nitrogen removal from the environment by geobatteries. <i>Trends in Biotechnology</i> , 2022, 40, 377-380.	4.9	10
162	Functional Biochar and Its Balanced Design. <i>ACS Environmental Au</i> , 2022, 2, 115-127.	3.3	37
163	Porous biochar supported Ag ₃ PO ₄ photocatalyst for "two-in-one" synergistic adsorptive-photocatalytic removal of methylene blue under visible light irradiation. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 106753.	3.3	14
164	Use of extracellular polymeric substances as natural redox mediators to enhance denitrification performance by accelerating electron transfer and carbon source metabolism. <i>Bioresource Technology</i> , 2022, 345, 126522.	4.8	30
165	Efficient removal of hexavalent chromium through adsorption-reduction-adsorption pathway by iron-clay biochar composite prepared from <i>Populus nigra</i> . <i>Separation and Purification Technology</i> , 2022, 285, 120386.	3.9	36

#	ARTICLE	IF	CITATIONS
166	Responses of bacterial taxonomic attributes to mercury species in rhizosphere paddy soil under natural sulphur-rich biochar amendment. <i>Ecotoxicology and Environmental Safety</i> , 2022, 229, 113058.	2.9	6
167	Abiotic reduction of 3-nitro-1,2,4-triazol-5-one (NTO) and other munitions constituents by wood-derived biochar through its rechargeable electron storage capacity. <i>Environmental Sciences: Processes and Impacts</i> , 2022, , .	1.7	3
168	Boosting photocatalytic reduction of nitrate to ammonia enabled by perovskite/biochar nanocomposites with oxygen defects and O-containing functional groups. <i>Chemosphere</i> , 2022, 294, 133763.	4.2	20
169	Engineered mesoporous biochar derived from rice husk for efficient removal of malachite green from wastewaters. <i>Bioresource Technology</i> , 2022, 347, 126749.	4.8	52
170	Advances on tailored biochar for bioremediation of antibiotics, pesticides and polycyclic aromatic hydrocarbon pollutants from aqueous and solid phases. <i>Science of the Total Environment</i> , 2022, 817, 153054.	3.9	41
171	Low molecular weight organic acids strengthen the electron transfer of natural FeS ₂ /biochar composite for Cr(VI) reduction: Experimental observations and governing mechanisms. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 107181.	3.3	11
172	Magnetic sludge-based biochar derived from Fenton sludge as an efficient heterogeneous Fenton catalyst for degrading Methylene blue. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 107242.	3.3	20
173	Iron/titanium oxide-biochar (Fe ₂ TiO ₅ /BC): A versatile adsorbent/photocatalyst for aqueous Cr(VI), Pb ²⁺ , F- and methylene blue. <i>Journal of Colloid and Interface Science</i> , 2022, 614, 603-616.	5.0	28
174	Biochar application in biofiltration systems to remove nutrients, pathogens, and pharmaceutical and personal care products from wastewater. <i>Journal of Environmental Quality</i> , 2022, 51, 129-151.	1.0	8
175	Wood Ash as an Additive in Biomass Pyrolysis: Effects on Biochar Yield, Properties, and Agricultural Performance. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 2720-2729.	3.2	15
176	Metabolic potential of anaerobic methane oxidizing archaea for a broad spectrum of electron acceptors. <i>Advances in Microbial Physiology</i> , 2022, 80, 157-201.	1.0	8
177	The regenerative role of biofilm in the removal of pesticides from stormwater in biochar-amended biofilters. <i>Environmental Science: Water Research and Technology</i> , 2022, 8, 1092-1110.	1.2	5
178	Biochar enhances partial denitrification/anammox by sustaining high rates of nitrate to nitrite reduction. <i>Bioresource Technology</i> , 2022, 349, 126869.	4.8	19
179	COD inhibition alleviation and anammox granular sludge stability improvement by biochar addition. <i>Journal of Cleaner Production</i> , 2022, 345, 131167.	4.6	44
181	Effects of pH on Biochar's heating value during acoustic treatment. <i>Biomass and Bioenergy</i> , 2022, 160, 106420.	2.9	2
182	A review of converting woody biomass waste into useful and eco-friendly road materials. <i>Transportation Safety and Environment</i> , 2022, 4, .	1.1	3
183	Nano-biochar modulates the formation of iron plaque through facilitating iron-involved redox reactions on aquatic plant root surfaces. <i>Environmental Science: Nano</i> , 2022, 9, 1974-1985.	2.2	4
184	Carbon nanomaterial-based sensor safety in different fields. , 2022, , 315-332.		2

#	ARTICLE	IF	CITATIONS
185	An assessment of how the properties of pyrochar and process thermodynamics impact pyrochar mediated microbial chain elongation in steering the production of medium-chain fatty acids towards n-caproate. <i>Bioresource Technology</i> , 2022, 358, 127294.	4.8	10
186	Transport Behaviors of Biochar Particles in Saturated Porous Media Under Dc Electric Field. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
187	Kitchen-Waste-Derived Biochar Modified Nanocomposites with Improved Photocatalytic Performances for Degrading Organic Contaminants. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
188	Novel Insights into the Impact of Nano-Biochar on Composition and Structural Transformation of Mineral/Nano-Biochar Heteroaggregates in the Presence of Root Exudates. <i>Environmental Science & Technology</i> , 2022, 56, 9816-9825.	4.6	13
189	Conductive biochar promotes oxygen utilization to inhibit greenhouse gas emissions during electric field-assisted aerobic composting. <i>Science of the Total Environment</i> , 2022, 842, 156929.	3.9	22
190	Recycling Agricultural Liquid Waste and Industrial Waste for Improving Nitrate and Veterinary Antibiotics by Woodchip Bioreactor. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
191	The effects of biochar and its applications in the microbial remediation of contaminated soil: A review. <i>Journal of Hazardous Materials</i> , 2022, 438, 129557.	6.5	66
193	Biochar facilitated bacterial reduction of Cr(VI) by <i>Shewanella Putrefaciens</i> CN32: Pathways and surface characteristics. <i>Environmental Research</i> , 2022, 214, 113971.	3.7	9
194	Application of biochar as an innovative soil ameliorant in bioretention system for stormwater treatment: A review of performance and its influencing factors. <i>Water Science and Technology</i> , 2022, 86, 1232-1252.	1.2	4
195	Kitchen-waste-derived biochar modified nanocomposites with improved photocatalytic performances for degrading organic contaminants. <i>Environmental Research</i> , 2022, 214, 114068.	3.7	4
196	Biochar-mediated abiotic and biotic degradation of halogenated organic contaminants – A review. <i>Science of the Total Environment</i> , 2022, 852, 158381.	3.9	19
197	Transport behaviors of biochar particles in saturated porous media under DC electric field. <i>Science of the Total Environment</i> , 2023, 856, 159084.	3.9	5
198	Removal of tetracycline by biochar-supported biogenetic sulfidated zero valent iron: Kinetics, pathways and mechanism. <i>Water Research</i> , 2022, 225, 119168.	5.3	12
199	A critical review on biochar-assisted free radicals mediated redox reactions influencing transformation of potentially toxic metals: Occurrence, formation, and environmental applications. <i>Environmental Pollution</i> , 2022, 315, 120335.	3.7	10
200	Effects of biochar on anaerobic treatment systems: Some perspectives. <i>Bioresource Technology</i> , 2023, 367, 128226.	4.8	11
201	Effects of modified biochars on the shifts of short-chain fatty acid profile, iron reduction, and bacterial community in paddy soil. <i>FEMS Microbiology Ecology</i> , 2022, 98, .	1.3	1
202	Promoting performance of Anammox by iron loaded sludge biochar with hydrothermal carbonization (HTC-Fe-BC) addition. <i>Chemical Engineering Research and Design</i> , 2023, 170, 596-607.	2.7	2
203	Biochar-Assisted Bioengineered Strategies for Metal Removal: Mechanisms, Key Considerations, and Perspectives for the Treatment of Solid and Liquid Matrixes. <i>Sustainability</i> , 2022, 14, 17049.	1.6	3

#	ARTICLE	IF	CITATIONS
204	Mechanisms and biological effects of organic amendments on mercury speciation in soil-rice systems: A review. <i>Ecotoxicology and Environmental Safety</i> , 2023, 251, 114516.	2.9	8
205	Activating soil nitrification by co-application of peanut straw biochar and organic fertilizer in a rare earth mining soil. <i>Science of the Total Environment</i> , 2023, 866, 161506.	3.9	4
206	Biochar-derived dissolved black carbon accelerates ferrihydrite microbial transformation and subsequent imidacloprid degradation. <i>Journal of Hazardous Materials</i> , 2023, 446, 130685.	6.5	10
207	Biochar's Electrochemical Properties Impact on Methanogenesis: Ruminal vs. Soil Processes. <i>Journal of Agricultural Chemistry and Environment</i> , 2023, 12, 28-43.	0.2	2
208	Electron exchange capacity of pyrogenic dissolved organic matter (pyDOM): complementarity of square-wave voltammetry in DMSO and mediated chronoamperometry in water. <i>Environmental Sciences: Processes and Impacts</i> , 0, , .	1.7	0
209	Preparation, characterisation and applications of bone char, a food waste-derived sustainable material: A review. <i>Journal of Environmental Management</i> , 2023, 339, 117896.	3.8	7
210	Chemical speciation determines combined cytotoxicity: Examples of biochar and arsenic/chromium. <i>Journal of Hazardous Materials</i> , 2023, 448, 130855.	6.5	5
211	Efficient nitrogen removal through coupling biochar with zero-valent iron by different packing modes in bioretention system. <i>Environmental Research</i> , 2023, 223, 115375.	3.7	10
212	Biochar-derived persistent free radicals and reactive oxygen species reduce the potential of biochar to mitigate soil N ₂ O emissions by inhibiting nosZ. <i>Soil Biology and Biochemistry</i> , 2023, 178, 108970.	4.2	11
213	Microbial reduction of Fe(III) in nontronite: Role of biochar as a redox mediator. <i>Geochimica Et Cosmochimica Acta</i> , 2023, 345, 102-116.	1.6	17
214	Nitrobenzene reduction promoted by the integration of carbon nanotubes and <i>Geobacter sulfurreducens</i> . <i>Environmental Pollution</i> , 2023, 325, 121444.	3.7	0
215	Synergetic effects of pyrrhotite and biochar on simultaneous removal of nitrate and phosphate in autotrophic denitrification system. <i>Water Environment Research</i> , 2023, 95, .	1.3	1
216	Recent Advances in Nano-metal Oxide-Biochar Composites for Efficient Removal of Environmental Contaminants. <i>Reviews of Environmental Contamination and Toxicology</i> , 2023, 261, .	0.7	0
217	Impact of wood-derived biochar on the hydrologic performance of bioretention media: Effects on aggregation, root growth, and water retention. <i>Journal of Environmental Management</i> , 2023, 339, 117864.	3.8	7
218	Conductive black carbon promoted biotransformation of undissolved 2, 2-dinitrobiphenyl by mediating electron transfer. <i>Science of the Total Environment</i> , 2023, 882, 163619.	3.9	0
223	Occurrence, Migration, and Transformation of Black Carbon in Environmental Matrix and Its Influence on the Environmental Fate of Coexisting Pollutants: A Review. <i>Reviews of Environmental Contamination and Toxicology</i> , 2023, 261, .	0.7	1
225	Assessing the Impact of Antecedent Dry Period and Storm Volume on Nitrogen Transport in Biochar-Amended and Compost-Amended Roadway Soils. , 2023, , .		0
231	Biochar in Catalysis and Biotransformation. <i>Materials Horizons</i> , 2023, , 19-47.	0.3	0

#	ARTICLE	IF	CITATIONS
242	Urban Stormwater Runoff for Potable Use: Potential and Challenges. Handbook of Environmental Chemistry, 2023, , .	0.2	0