Biochar application for the remediation of heavy metal field trials

Science of the Total Environment

619-620, 815-826

DOI: 10.1016/j.scitotenv.2017.11.132

Citation Report

#	Article	IF	Citations
1	Hydrochars from bamboo sawdust through acid assisted and two-stage hydrothermal carbonization for removal of two organics from aqueous solution. Bioresource Technology, 2018, 261, 257-264.	4.8	74
2	Remediation of multiple heavy metal-contaminated soil through the combination of soil washing and in situ immobilization. Science of the Total Environment, 2018, 635, 92-99.	3.9	198
3	Continuous leaching modifies the surface properties and metal(loid) sorption of sludge-derived biochar. Science of the Total Environment, 2018, 625, 731-737.	3.9	31
4	Mechanical properties of soil freshly amended with Miscanthus biochar. Soil Use and Management, 2018, 34, 563-574.	2.6	6
5	A field study investigating the potential use of phosphorus combined with organic amendments on cadmium accumulation by wheat and subsequent rice. Arabian Journal of Geosciences, 2018, 11, 1.	0.6	14
6	Fly Ash Modified Coalmine Solid Wastes for Stabilization of Trace Metals in Mining Damaged Land Reclamation: A Case Study in Xuzhou Coalmine Area. International Journal of Environmental Research and Public Health, 2018, 15, 2317.	1.2	5
7	Adsorption and Biomass: Current Interconnections and Future Challenges. Current Sustainable/Renewable Energy Reports, 2018, 5, 247-256.	1.2	7
8	Lead-based paint remains a major public health concern: A critical review of global production, trade, use, exposure, health risk, and implications. Environment International, 2018, 121, 85-101.	4.8	160
9	Catalytic Degradation of Diatrizoate by Persulfate Activation with Peanut Shell Biochar-Supported Nano Zero-Valent Iron in Aqueous Solution. International Journal of Environmental Research and Public Health, 2018, 15, 1937.	1.2	28
10	Multi-year double cropping biochar field trials in Nepal: Finding the optimal biochar dose through agronomic trials and cost-benefit analysis. Science of the Total Environment, 2018, 637-638, 1333-1341.	3.9	61
11	Enhanced biodegradation of hydrocarbons in petroleum tank bottom oil sludge and characterization of biocatalysts and biosurfactants. Journal of Environmental Management, 2018, 220, 87-95.	3.8	73
12	Are raw materials or composting conditions and time that most influence the maturity and/or quality of composts? Comparison of obtained composts on soil properties. Journal of Cleaner Production, 2018, 195, 93-101.	4.6	71
13	Assessing long-term stability of cadmium and lead in a soil washing residue amended with MgO-based binders using quantitative accelerated ageing. Science of the Total Environment, 2018, 643, 1571-1578.	3.9	57
14	Production and characterization of a value added biochar mix using seaweed, rice husk and pine sawdust: A parametric study. Journal of Cleaner Production, 2018, 200, 641-656.	4.6	73
15	Amending potential of organic and industrial by-products applied to heavy metal-rich mining soils. Ecotoxicology and Environmental Safety, 2018, 162, 581-590.	2.9	32
16	Effect of modified coconut shell biochar on availability of heavy metals and biochemical characteristics of soil in multiple heavy metals contaminated soil. Science of the Total Environment, 2018, 645, 702-709.	3.9	182
17	A critical review of mechanisms involved in the adsorption of organic and inorganic contaminants through biochar. Arabian Journal of Geosciences, 2018, 11, 1.	0.6	123
18	Sustainable in situ remediation of recalcitrant organic pollutants in groundwater with controlled release materials: A review. Journal of Controlled Release, 2018, 283, 200-213.	4.8	189

#	Article	IF	Citations
19	Investigation on bio-oil yield and quality with scrap tire addition in sugarcane bagasse pyrolysis. Journal of Cleaner Production, 2018, 196, 927-934.	4.6	82
20	Biochar-induced changes in metal mobility and uptake by perennial plants in a ferralsol of Brazilâ€™s Atlantic forest. Biochar, 2019, 1, 309-324.	6.2	9
21	Removal of Cr(VI) from water using pineapple peel derived biochars: Adsorption potential and re-usability assessment. Journal of Molecular Liquids, 2019, 293, 111497.	2.3	165
22	Pore-scale lattice Boltzmann modeling of solute transport in saturated biochar amended soil aggregates. Journal of Hydrology, 2019, 577, 123933.	2.3	7
23	Enhanced anaerobic degradation of selected nitrogen heterocyclic compounds with the assistance of carboxymethyl cellulose. Science of the Total Environment, 2019, 689, 781-788.	3.9	22
24	Responses of nitric oxide and hydrogen sulfide in regulating oxidative defence system in wheat plants grown under cadmium stress. Physiologia Plantarum, 2020, 168, 345-360.	2.6	204
25	Anthropogenic cadmium cycles and emissions in Mainland China 1990â€“2015. Journal of Cleaner Production, 2019, 230, 1256-1265.	4.6	21
26	Phytoremediation: Climate change resilience and sustainability assessment at a coastal brownfield redevelopment. Environment International, 2019, 130, 104945.	4.8	54
27	Removal of lead by rice husk biochars produced at different temperatures and implications for their environmental utilizations. Chemosphere, 2019, 235, 825-831.	4.2	107
28	Photo-induced redox coupling of dissolved organic matter and iron in biochars and soil system: Enhanced mobility of arsenic. Science of the Total Environment, 2019, 689, 1037-1043.	3.9	34
29	Flow-induced crystallization of biochar in bio-asphalt under various aging conditions. Science of the Total Environment, 2019, 695, 133943.	3.9	41
30	The effects of biochar and dredged sediments on soil structure and fertility promote the growth, photosynthetic and rhizosphere microbial diversity of Phragmites communis (Cav.) Trin. ex Steud. Science of the Total Environment, 2019, 697, 134073.	3.9	29
31	Carboxylated graphene oxide-chitosan spheres immobilize Cu2+ in soil and reduce its bioaccumulation in wheat plants. Environment International, 2019, 133, 105208.	4.8	38
32	Earthworm activities weaken the immobilizing effect of biochar as amendment for metal polluted soils. Science of the Total Environment, 2019, 696, 133729.	3.9	26
33	Complexation and conformation of lead ion with poly-Î³-glutamic acid in soluble state. PLoS ONE, 2019, 14, e0218742.	1.1	7
34	Field experiment on the effects of sepiolite and biochar on the remediation of Cd- and Pb-polluted farmlands around a Pbâ€“Zn mine in Yunnan Province, China. Environmental Science and Pollution Research, 2019, 26, 7743-7751.	2.7	51
35	Assessment of sources of heavy metals in soil and dust at children's playgrounds in Beijing using GIS and multivariate statistical analysis. Environment International, 2019, 124, 320-328.	4.8	262
36	Lead contamination in Chinese surface soils: Source identification, spatial-temporal distribution and associated health risks. Critical Reviews in Environmental Science and Technology, 2019, 49, 1386-1423.	6.6	96

#	Article	IF	Citations
37	An explanation of soil amendments to reduce cadmium phytoavailability and transfer to food chain. Science of the Total Environment, 2019, 660, 80-96.	3.9	254
38	Combining biochar and sewage sludge for immobilization of heavy metals in mining soils. Ecotoxicology and Environmental Safety, 2019, 172, 326-333.	2.9	143
39	Nature based solutions for contaminated land remediation and brownfield redevelopment in cities: A review. Science of the Total Environment, 2019, 663, 568-579.	3.9	201
40	Cadmium immobilization and alleviation of its toxicity for soybean grown in a clay loam contaminated soil using sugarcane bagasse-derived biochar. Environmental Science and Pollution Research, 2019, 26, 21849-21857.	2.7	17
41	Bio-organic stabilizing agent shows promising prospect for the stabilization of cadmium in contaminated farmland soil. Environmental Science and Pollution Research, 2019, 26, 23399-23406.	2.7	19
42	Phytolithâ€rich biochar: A potential Si fertilizer in desilicated soils. GCB Bioenergy, 2019, 11, 1264-1282.	2.5	90
43	Risk evaluation of biochars produced from Cd-contaminated rice straw and optimization of its production for Cd removal. Chemosphere, 2019, 233, 149-156.	4.2	54
44	Formation of disinfection byproducts as affected by biochar during water treatment. Chemosphere, 2019, 233, 190-197.	4.2	20
45	Effects of simulated Cd deposition on soil Cd availability, microbial response, and crop Cd uptake in the passivation-remediation process of Cd-contaminated purple soil. Science of the Total Environment, 2019, 683, 782-792.	3.9	52
46	Adsorption and sequestration of cadmium ions by polyptychial mesoporous biochar derived from Bacillus sp. biomass. Environmental Science and Pollution Research, 2019, 26, 23505-23523.	2.7	5
47	Preparation, modification and environmental application of biochar: A review. Journal of Cleaner Production, 2019, 227, 1002-1022.	4.6	1,216
48	Surface-Modified Biochar with Polydentate Binding Sites for the Removal of Cadmium. International Journal of Molecular Sciences, 2019, 20, 1775.	1.8	23
49	Effects of Farming Activities on the Biogeochemistry of Mercury in Riceâ€“Paddy Soil Systems. Bulletin of Environmental Contamination and Toxicology, 2019, 102, 635-642.	1.3	18
50	Biochar significantly alters rhizobacterial communities and reduces Cd concentration in rice grains grown on Cd-contaminated soils. Science of the Total Environment, 2019, 676, 627-638.	3.9	82
51	Enhanced Pb immobilization via the combination of biochar and phosphate solubilizing bacteria. Environment International, 2019, 127, 395-401.	4.8	156
52	Metal bioavailability and the soil microbiome. Advances in Agronomy, 2019, 155, 79-120.	2.4	31
53	Strengthening social-environmental management at contaminated sites to bolster Green and Sustainable Remediation via a survey. Chemosphere, 2019, 225, 295-303.	4.2	15
54	Mercury speciation, transformation, and transportation in soils, atmospheric flux, and implications for risk management: A critical review. Environment International, 2019, 126, 747-761.	4.8	278

#	Article	IF	Citations
55	A review on biochar modulated soil condition improvements and nutrient dynamics concerning crop yields: Pathways to climate change mitigation and global food security. Chemosphere, 2019, 227, 345-365.	4.2	204
56	Microplastics undergo accelerated vertical migration in sand soil due to small size and wet-dry cycles. Environmental Pollution, 2019, 249, 527-534.	3.7	287
57	Control of Contaminant Transport Caused by Open-Air Heavy Metal Slag in Zhehai, Southwest China. International Journal of Environmental Research and Public Health, 2019, 16, 443.	1.2	1
58	Characterization of biochar and byproducts from slow pyrolysis of hinoki cypress. Bioresource Technology Reports, 2019, 6, 217-222.	1.5	83
59	In situremediation of subsurface contamination: opportunities and challenges for nanotechnology and advanced materials. Environmental Science: Nano, 2019, 6, 1283-1302.	2.2	65
60	Biochar compost blends facilitate switchgrass growth in mine soils by reducing Cd and Zn bioavailability. Biochar, 2019, 1, 97-114.	6.2	74
61	Soil lead immobilization by biochars in short-term laboratory incubation studies. Environment International, 2019, 127, 190-198.	4.8	70
62	Combined use of biochar and zinc oxide nanoparticle foliar spray improved the plant growth and decreased the cadmium accumulation in rice (Oryza sativa L.) plant. Environmental Science and Pollution Research, 2019, 26, 11288-11299.	2.7	166
63	Mercury distribution and speciation in biochar particles reacted with contaminated sediment up to 1030â€¯days: A synchrotron-based study. Science of the Total Environment, 2019, 662, 915-922.	3.9	22
64	Formation, characteristics, and applications of environmentally persistent free radicals in biochars: A review. Bioresource Technology, 2019, 281, 457-468.	4.8	251
65	Alleviation of cadmium accumulation in maize (Zea mays L.) by foliar spray of zinc oxide nanoparticles and biochar to contaminated soil. Environmental Pollution, 2019, 248, 358-367.	3.7	230
66	Management of biosolids-derived hydrochar (Sewchar): Effect on plant germination, and farmers' acceptance. Journal of Environmental Management, 2019, 237, 200-214.	3.8	48
67	Supramolecular nanoarchitectonics for functional materials. APL Materials, 2019, 7, .	2.2	18
68	Review of biochar for the management of contaminated soil: Preparation, application and prospect. Science of the Total Environment, 2019, 659, 473-490.	3.9	310
69	Sustainable utilization of a recovered struvite/diatomite compound for lead immobilization in contaminated soil: potential, mechanism, efficiency, and risk assessment. Environmental Science and Pollution Research, 2019, 26, 4890-4900.	2.7	7
70	Potential of Biochar for Managing Metal Contaminated Areas, in Synergy With Phytomanagement or Other Management Options. , 2019, , 91-111.		4
71	Spatial distribution of lead contamination in soil and equipment dust at children's playgrounds in Beijing, China. Environmental Pollution, 2019, 245, 363-370.	3.7	64
72	A novel electrochemical modification combined with one-step pyrolysis for preparation of sustainable thorn-like iron-based biochar composites. Bioresource Technology, 2019, 274, 379-385.	4.8	89

#	Article	IF	Citations
73	Effect of production temperature on lead removal mechanisms by rice straw biochars. Science of the Total Environment, 2019, 655, 751-758.	3.9	214
74	Thermal conversion of a promising phytoremediation plant (Symphytum officinale L.) into biochar: Dynamic of potentially toxic elements and environmental acceptability assessment of the biochar. Bioresource Technology, 2019, 274, 73-82.	4.8	53
75	Effect of tobacco stem-derived biochar on soil metal immobilization and the cultivation of tobacco plant. Journal of Soils and Sediments, 2019, 19, 2313-2321.	1.5	33
76	Activated petroleum waste sludge biochar for efficient catalytic ozonation of refinery wastewater. Science of the Total Environment, 2019, 651, 2631-2640.	3.9	86
77	Ten-year regional monitoring of soil-rice grain contamination by heavy metals with implications for target remediation and food safety. Environmental Pollution, 2019, 244, 431-439.	3.7	100
78	Porous biochar composite assembled with ternary needle-like iron-manganese-sulphur hybrids for high-efficiency lead removal. Bioresource Technology, 2019, 272, 415-420.	4.8	78
79	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.	3.9	339
80	Possibilities and requirements for introducing agri-environment measures in land consolidation projects in China, evidence from ecosystem services and farmers' attitudes. Science of the Total Environment, 2019, 650, 3145-3155.	3.9	39
81	The role of sewage sludge biochar in methylmercury formation and accumulation in rice. Chemosphere, 2019, 218, 527-533.	4.2	38
82	Efficacy and limitations of low-cost adsorbents for in-situ stabilisation of contaminated marine sediment. Journal of Cleaner Production, 2019, 212, 420-427.	4.6	23
83	Application of biochar in a CIC reactor to relieve ammonia nitrogen stress and promote microbial community during food waste treatment. Journal of Cleaner Production, 2019, 209, 353-362.	4.6	40
84	Synthesis of MgO-coated corncob biochar and its application in lead stabilization in a soil washing residue. Environment International, 2019, 122, 357-362.	4.8	164
85	Zero-waste algal biorefinery for bioenergy and biochar: A green leap towards achieving energy and environmental sustainability. Science of the Total Environment, 2019, 650, 2467-2482.	3.9	157
86	Using Industrial Sewage Sludge-Derived Biochar to Immobilize Selected Heavy Metals in a Contaminated Calcareous Soil. Waste and Biomass Valorization, 2020, 11, 2825-2836.	1.8	17
87	Remediation of heavy-metal-contaminated soils by biochar: a review. Environmental Geotechnics, 0, , 1-14.	1.3	29
88	The mechanisms of biochar interactions with microorganisms in soil. Environmental Geochemistry and Health, 2020, 42, 2495-2518.	1.8	125
89	A green biochar/iron oxide composite for methylene blue removal. Journal of Hazardous Materials, 2020, 384, 121286.	6.5	315
90	Removal mechanisms of aqueous Cr(VI) using apple wood biochar: a spectroscopic study. Journal of Hazardous Materials, 2020, 384, 121371.	6.5	118

#	Article	IF	Citations
91	Understanding structure-performance correlation of biochar materials in environmental remediation and electrochemical devices. Chemical Engineering Journal, 2020, 382, 122977.	6.6	109
92	Synergistic immobilization of potentially toxic elements (PTEs) by biochar and nanoparticles in alkaline soil. Chemosphere, 2020, 241, 124932.	4.2	29
93	Highly effective remediation of Pb(II) and Hg(II) contaminated wastewater and soil by flower-like magnetic MoS2 nanohybrid. Science of the Total Environment, 2020, 699, 134341.	3.9	102
94	Removal of fluoride from wastewater solution using Ce-AlOOH with oxalic acid as modification. Journal of Hazardous Materials, 2020, 384, 121373.	6.5	86
95	A char-clay composite catalyst derived from spent bleaching earth for efficient ozonation of recalcitrants in water. Science of the Total Environment, 2020, 699, 134395.	3.9	12
96	Biochar for Water and Soil Remediation: Production, Characterization, and Application. , 2020, , 153-196.		13
97	An effective biochar-based slow-release fertilizer for reducing nitrogen loss in paddy fields. Journal of Soils and Sediments, 2020, 20, 3027-3040.	1.5	58
98	In situ immobilization of zinc polluted soil using thermal-activated serpentine. Archives of Agronomy and Soil Science, 2020, 66, 1005-1014.	1.3	2
99	Assessment of biochar and/or nano zero-valent iron for the stabilisation of Zn, Pb and Cd: A temporal study of solid phase geochemistry under changing soil conditions. Chemosphere, 2020, 242, 125248.	4.2	39
100	Biochar effects on soil chemical properties and mobilization of cadmium (Cd) and lead (Pb) in paddy soil. Soil Use and Management, 2020, 36, 320-327.	2.6	36
101	Cadmium immobilization in aqueous solution by Aspergillus niger and geological fluorapatite. Environmental Science and Pollution Research, 2020, 27, 7647-7656.	2.7	14
102	The compound effects of biochar and iron on watercress in a Cd/Pbâ€“contaminated soil. Environmental Science and Pollution Research, 2020, 27, 6312-6325.	2.7	19
103	Biochar induced modification of graphene oxide & nZVI and its impact on immobilization of toxic copper in soil. Environmental Pollution, 2020, 259, 113851.	3.7	58
104	Burkholderia phytofirmans PsJN and tree twigs derived biochar together retrieved Pb-induced growth, physiological and biochemical disturbances by minimizing its uptake and translocation in mung bean (Vigna radiata L.). Journal of Environmental Management, 2020, 257, 109974.	3.8	46
105	Field trials of phytomining and phytoremediation: A critical review of influencing factors and effects of additives. Critical Reviews in Environmental Science and Technology, 2020, 50, 2724-2774.	6.6	84
106	Comparison of different crop residue-based technologies for their energy production and air pollutant emission. Science of the Total Environment, 2020, 707, 136122.	3.9	21
107	Soil amendments for immobilization of potentially toxic elements in contaminated soils: A critical review. Environment International, 2020, 134, 105046.	4.8	701
108	Preparation of montmorillonite modified biochar with various temperatures and their mechanism for Zn ion removal. Journal of Hazardous Materials, 2020, 391, 121692.	6.5	138

#	Article	IF	Citations
109	Remediation of cadmium and lead polluted soil using thiol-modified biochar. Journal of Hazardous Materials, 2020, 388, 122037.	6.5	182
110	Biochar made from low density wood has greater plant available water than biochar made from high density wood. Science of the Total Environment, 2020, 705, 135856.	3.9	37
111	Effect of amendment of biochar supplemented with Si on Cd mobility and rice uptake over three rice growing seasons in an acidic Cd-tainted paddy from central South China. Science of the Total Environment, 2020, 709, 136101.	3.9	43
112	Biochar-related studies from 1999 to 2018: a bibliometrics-based review. Environmental Science and Pollution Research, 2020, 27, 2898-2908.	2.7	37
113	Exogenous phosphorus treatment facilitates chelation-mediated cadmium detoxification in perennial ryegrass (Lolium perenne L.). Journal of Hazardous Materials, 2020, 389, 121849.	6.5	67
114	The role of biochar in organic waste composting and soil improvement: A review. Waste Management, 2020, 102, 884-899.	3.7	267
115	Biochar-assisted phytoextraction of Cd and Zn by Noccaea caerulescens on a contaminated soil: A four-year lysimeter study. Science of the Total Environment, 2020, 707, 135654.	3.9	17
116	Effect of pyrolysis temperature on characteristics, chemical speciation and environmental risk of Cr, Mn, Cu, and Zn in biochars derived from pig manure. Science of the Total Environment, 2020, 704, 135283.	3.9	66
117	Reducing bioavailability of heavy metals in contaminated soil and uptake by maize using organic-inorganic mixed fertilizer. Chemosphere, 2020, 261, 128122.	4.2	18
118	Combined use of municipal solid waste biochar and bacterial biosorbent synergistically decreases Cd(II) and Pb(II) concentration in edible tissue of forage maize irrigated with heavy metalâ€“spiked water. Heliyon, 2020, 6, e04688.	1.4	16
119	Sorption of pharmaceuticals and personal care products (PPCPs) from water and wastewater by carbonaceous materials: A review. Critical Reviews in Environmental Science and Technology, 2022, 52, 727-766.	6.6	37
120	Ameliorative effect of Lantana camara biochar on coal mine spoil and growth of maize (Zea) Tj ETQq1 1 0.784314 rgBT /Ov	2.6	34
121	Biocharâ€”A Panacea for Agriculture or Just Carbon?. Horticulturae, 2020, 6, 37.	1.2	17
122	Effects of Soil Amendments on Heavy Metal Immobilization and Accumulation by Maize Grown in a Multiple-Metal-Contaminated Soil and Their Potential for Safe Crop Production. Toxics, 2020, 8, 102.	1.6	45
123	Recycling of Organic Wastes through Composting: Process Performance and Compost Application in Agriculture. Agronomy, 2020, 10, 1838.	1.3	135
124	Response of soil fertility and Cu and Cd availability to biochar application on paddy soils with different acidification levels. Biomass Conversion and Biorefinery, 2022, 12, 1493-1502.	2.9	13
125	Effect of immobilizing reagents on soil Cd and Pb lability under freeze-thaw cycles: Implications for sustainable agricultural management in seasonally frozen land. Environment International, 2020, 144, 106040.	4.8	54
126	Biochar Aging: Mechanisms, Physicochemical Changes, Assessment, And Implications for Field Applications. Environmental Science & Technology, 2020, 54, 14797-14814.	4.6	273

#	Article	IF	Citations
127	Dose-dependent Effect of Biochar as Soil Amendment on Reducing Copper Phytotoxicity and Mobility. International Journal of Environmental Research, 2020, 14, 751-759.	1.1	4
128	Biochar-Facilitated Soil Remediation: Mechanisms and Efficacy Variations. Frontiers in Environmental Science, 2020, 8, .	1.5	127
129	Development of the Technology for Processing Plant Breeding By-Products to Obtain Biosorbent. E3S Web of Conferences, 2020, 169, 02011.	0.2	0
130	Assessing Options for Remediation of Contaminated Mine Site Drainage Entering the River Teign, Southwest England. Minerals (Basel, Switzerland), 2020, 10, 721.	0.8	3
131	Characterization and performance of low cost amendments to immobilize lead in contaminated soil. IOP Conference Series: Materials Science and Engineering, 2020, 858, 012012.	0.3	1
132	Assessment of Agro-Environmental Impacts for Supplemented Methods to Biochar Manure Pellets during Rice (Oryza sativa L.) Cultivation. Energies, 2020, 13, 2070.	1.6	5
133	A Comparison of Thermal Processing Strategies for Landfill Reclamation: Methods, Products, and a Promising Path Forward. Resources, Conservation and Recycling, 2020, 160, 104876.	5.3	17
134	Sustainable soil use and management: An interdisciplinary and systematic approach. Science of the Total Environment, 2020, 729, 138961.	3.9	138
135	Effects of Biochar on the Compression and Swelling Characteristics of Clayey Soils. International Journal of Geosynthetics and Ground Engineering, 2020, 6, 1.	0.9	15
136	Pyrolysis temperature influences the characteristics of rice straw and husk biochar and sorption/desorption behaviour of their biourea composite. Bioresource Technology, 2020, 314, 123674.	4.8	46
137	Regulation of Cu and Zn migration in soil by biochar during snowmelt. Environmental Research, 2020, 186, 109566.	3.7	8
138	Application of Nanotechnology Solutions in Plants Fertilization. , 2020, , .		10
139	Poly-Î³-glutamic acid-producing bacteria reduced Cd uptake and effected the rhizosphere microbial communities of lettuce. Journal of Hazardous Materials, 2020, 398, 123146.	6.5	28
140	Characteristics of denitrification genes and relevant enzyme activities in heavy-metal polluted soils remediated by biochar and compost. Science of the Total Environment, 2020, 739, 139987.	3.9	57
141	Effect of wheat straw derived biochar on immobilization of Cd and Pb in single- and binary-metal contaminated soil. Human and Ecological Risk Assessment (HERA), 2020, 26, 2420-2433.	1.7	6
142	Changes in Soil Properties and Bacterial Community Composition with Biochar Amendment after Six Years. Agronomy, 2020, 10, 746.	1.3	30
143	Biochar-mediated enhanced ethanol fermentation (BMEEF) in Zymomonas mobilis under furfural and acetic acid stress. Biotechnology for Biofuels, 2020, 13, 28.	6.2	14
144	Restoration of soil quality using biochar and brown coal waste: A review. Science of the Total Environment, 2020, 722, 137852.	3.9	113

#	Article	IF	Citations
145	A magnetic macro-porous biochar sphere as vehicle for the activation and removal of heavy metals from contaminated agricultural soil. Chemical Engineering Journal, 2020, 390, 124638.	6.6	44
146	Influence of Aged Biochar Modified by Cd2+ on Soil Properties and Microbial Community. Sustainability, 2020, 12, 4868.	1.6	14
147	Recycling application of waste long-root Eichhornia crassipes in the heavy metal removal using oxidized biochar derived as adsorbents. Bioresource Technology, 2020, 314, 123749.	4.8	35
148	Effects of ZnO Nanoparticles and Biochar of Rice Straw and Cow Manure on Characteristics of Contaminated Soil and Sunflower Productivity, Oil Quality, and Heavy Metals Uptake. Agronomy, 2020, 10, 790.	1.3	75
149	Effects of different water management strategies on the stability of cadmium and copper immobilization by biochar in rice-wheat rotation system. Ecotoxicology and Environmental Safety, 2020, 202, 110887.	2.9	14
150	Metal contamination and bioremediation of agricultural soils for food safety and sustainability. Nature Reviews Earth & Environment, 2020, 1, 366-381.	12.2	493
151	Biochar and bacteria inoculated biochar enhanced Cd and Cu immobilization and enzymatic activity in a polluted soil. Environment International, 2020, 137, 105576.	4.8	236
152	Apply biochar to ameliorate soda saline-alkali land, improve soil function and increase corn nutrient availability in the Songnen Plain. Science of the Total Environment, 2020, 722, 137428.	3.9	115
153	Simultaneous removal of arsenic, cadmium, and lead from soil by iron-modified magnetic biochar. Environmental Pollution, 2020, 261, 114157.	3.7	136
154	Effect of biochar on desiccation cracking characteristics of clayey soils. Geoderma, 2020, 364, 114182.	2.3	54
155	Effects of Zn in sludge-derived biochar on Cd immobilization and biological uptake by lettuce. Science of the Total Environment, 2020, 714, 136721.	3.9	19
156	Inoculation of Cd-contaminated paddy soil with biochar-supported microbial cell composite: A novel approach to reducing cadmium accumulation in rice grains. Chemosphere, 2020, 247, 125850.	4.2	38
157	Mechanisms of Pb and/or Zn adsorption by different biochars: Biochar characteristics, stability, and binding energies. Science of the Total Environment, 2020, 717, 136894.	3.9	121
158	Evaluation of Spent Grain Biochar Impact on Hop (Humulus lupulus L.) Growth by Multivariate Image Analysis. Applied Sciences (Switzerland), 2020, 10, 533.	1.3	16
159	Effects of excessive impregnation, magnesium content, and pyrolysis temperature on MgO-coated watermelon rind biochar and its lead removal capacity. Environmental Research, 2020, 183, 109152.	3.7	60
160	Effects of Soil Amendments on Microbial Activities in a Typical Cd-Contaminated Purple Field Soil, Southwestern China. Bulletin of Environmental Contamination and Toxicology, 2020, 104, 380-385.	1.3	5
161	Influence of colloidal Fe(OH)3 on the adsorption characteristics of strontium in porous media from a candidate high-level radioactive waste geological disposal site. Environmental Pollution, 2020, 260, 113997.	3.7	16
162	Simultaneous Immobilization of Soil Cd(II) and As(V) by Fe-Modified Biochar. International Journal of Environmental Research and Public Health, 2020, 17, 827.	1.2	30

#	Article	IF	Citations
163	Stabilization of heavy metal-contaminated soils by biochar: Challenges and recommendations. Science of the Total Environment, 2020, 729, 139060.	3.9	185
164	Sulfur-modified biochar as a soil amendment to stabilize mercury pollution: An accelerated simulation of long-term aging effects. Environmental Pollution, 2020, 264, 114687.	3.7	71
165	Green and sustainable remediation: concepts, principles, and pertaining research. , 2020, , 1-17.		11
166	Remediation of PBDEs-metal co-contaminated soil by the combination of metal stabilization, persulfate oxidation and bioremediation. Chemosphere, 2020, 252, 126538.	4.2	25
167	Evaluating the protection of bacteria from extreme Cd (II) stress by P-enriched biochar. Environmental Pollution, 2020, 263, 114483.	3.7	46
168	Application of biogas slurry rather than biochar increases soil microbial functional gene signal intensity and diversity in a poplar plantation. Soil Biology and Biochemistry, 2020, 146, 107825.	4.2	28
169	Remediation of Cr(VI)-Contaminated Soil by Nano-Zero-Valent Iron in Combination with Biochar or Humic Acid and the Consequences for Plant Performance. Toxics, 2020, 8, 26.	1.6	33
170	Effect of aging on stabilization of Cd and Ni by biochars and enzyme activities in a historically contaminated alkaline agricultural soil simulated with wetâ€“dry and freezeâ€“thaw cycling. Environmental Pollution, 2021, 268, 115846.	3.7	36
171	Modification on biochars for applications: A research update. Bioresource Technology, 2021, 319, 124100.	4.8	118
172	Effects of straw biochar application on soil temperature, available nitrogen and growth of corn. Journal of Environmental Management, 2021, 277, 111331.	3.8	69
173	Highly effective stabilization of Cd and Cu in two different soils and improvement of soil properties by multiple-modified biochar. Ecotoxicology and Environmental Safety, 2021, 207, 111294.	2.9	81
174	Influences of rice straw biochar and organic manure on forage soybean nutrient and Cd uptake. International Journal of Phytoremediation, 2021, 23, 53-63.	1.7	9
175	Enriched biogas and biofertilizer production from Eichhornia weed biomass in cow dung biochar-amended anaerobic digestion system. Environmental Technology and Innovation, 2021, 21, 101201.	3.0	25
176	A meta-analysis of heavy metal bioavailability response to biochar aging: Importance of soil and biochar properties. Science of the Total Environment, 2021, 756, 144058.	3.9	106
177	Design and fabrication of exfoliated Mg/Al layered double hydroxides on biochar support. Journal of Cleaner Production, 2021, 289, 125142.	4.6	56
178	The effect of soil moisture regime and biochar application on lead (Pb) stabilization in a contaminated soil. Ecotoxicology and Environmental Safety, 2021, 208, 111626.	2.9	25
179	Responses of ammonia-oxidizing microorganisms to biochar and compost amendments of heavy metals-polluted soil. Journal of Environmental Sciences, 2021, 102, 263-272.	3.2	40
180	Remediation of contaminated soil and groundwater using chemical reduction and solidification/stabilization method: a case study. Environmental Science and Pollution Research, 2021, 28, 12766-12779.	2.7	16

#	Article	IF	Citations
181	Biochar improves heavy metal passivation during wet anaerobic digestion of pig manure. Environmental Science and Pollution Research, 2021, 28, 635-644.	2.7	26
182	Analysis of the long-term effectiveness of biochar immobilization remediation on heavy metal contaminated soil and the potential environmental factors weakening the remediation effect: A review. Ecotoxicology and Environmental Safety, 2021, 207, 111261.	2.9	142
183	Sustainable improvement of soil health utilizing biochar and arbuscular mycorrhizal fungi: A review. Environmental Pollution, 2021, 268, 115549.	3.7	74
184	Application of mixed bacteria-loaded biochar to enhance uranium and cadmium immobilization in a co-contaminated soil. Journal of Hazardous Materials, 2021, 401, 123823.	6.5	93
185	Mitigation of arsenic accumulation in arugula (Eruca sativa Mill.) using Fe/Al/Zn impregnated biochar composites. Environmental Science and Pollution Research, 2021, 28, 4136-4146.	2.7	26
186	Effect of biochar and compost on cadmium bioavailability and its uptake by wheatâ€“rice cropping system irrigated with untreated sewage water: a field study. Arabian Journal of Geosciences, 2021, 14, 1.	0.6	19
187	Organic amendments potentially stabilize metals in smelter contaminated Arctic soils: An incubation study. Heliyon, 2021, 7, e06022.	1.4	0
188	Biochar for sustainable soil management. Soil Use and Management, 2021, 37, 2-6.	2.6	25
189	Effect of Heavy Metal Contamination on Soil Enzymes Activities. Journal of Geoscience and Environment Protection, 2021, 09, 135-154.	0.2	5
190	From Land Consolidation and Food Safety to Taobao Villages and Alternative Food Networks: Four Components of China's Dynamic Agri-Rural Innovation System. Journal of Rural Studies, 2021, 82, 404-416.	2.1	14
191	Effect of modified biochar on the availability of some heavy metals speciation and investigation of contaminated calcareous soil. Environmental Earth Sciences, 2021, 80, 1.	1.3	17
192	Improving the microenvironment of Cd-contaminated river sediments through humic substances washing and zeolite immobilization. Chemical Engineering Research and Design, 2021, 146, 779-788.	2.7	16
193	A critical review on silver nanoparticles: From synthesis and applications to its mitigation through low-cost adsorption by biochar. Journal of Environmental Management, 2021, 281, 111918.	3.8	107
194	Single and Competitive Adsorption Behaviors of Cu2+, Pb2+ and Zn2+ on the Biochar and Magnetic Biochar of Pomelo Peel in Aqueous Solution. Water (Switzerland), 2021, 13, 868.	1.2	17
195	Biochar remediation of soil: linking biochar production with function in heavy metal contaminated soils. Plant, Soil and Environment, 2021, 67, 183-201.	1.0	23
196	Effect of soil characteristics on cadmium absorption and plant growth of Theobroma cacao L. seedlings. Journal of the Science of Food and Agriculture, 2021, 101, 5437-5445.	1.7	5
197	A review of green remediation strategies for heavy metal contaminated soil. Soil Use and Management, 2021, 37, 936-963.	2.6	117
198	Dry-wet and freeze-thaw aging activate endogenous copper and cadmium in biochar. Journal of Cleaner Production, 2021, 288, 125605.	4.6	39

#	Article	IF	Citations
199	Rice Rhizospheric Effects on the Bioavailability of Toxic Trace Elements during Land Application of Biochar. Environmental Science & Technology, 2021, 55, 7344-7354.	4.6	22
200	Toxicity of biogenic zinc oxide nanoparticles to soil organic matter cycling and their interaction with rice-straw derived biochar. Scientific Reports, 2021, 11, 8429.	1.6	20
201	Lepidolite extraction solid by-product: Mitigation of thallium leaching and utilization of radiogenic strontium isotopes as a tracer. Environmental Advances, 2021, 3, 100035.	2.2	5
202	Enhanced adsorption for the removal of tetracycline hydrochloride (TC) using ball-milled biochar derived from crayfish shell. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 615, 126254.	2.3	68
203	Combined use of lime, bentonite, and biochar for immobilization of Cd and mobilization of Se in paddy soil. Environmental Science and Pollution Research, 2021, 28, 45050-45063.	2.7	7
204	Cavitated Charcoalâ€"An Innovative Method for Affecting the Biochemical Properties of Soil. Materials, 2021, 14, 2466.	1.3	2
205	Effects of Different Biochars, Activated Carbons and Redmuds on the Growth of Trifolium repens and As and Pb Stabilization in a Former Mine Technosol. Bulletin of Environmental Contamination and Toxicology, 2022, 108, 403-414.	1.3	4
206	Silicon alleviates cadmium stress in basil (Ocimum basilicum L.) through alteration of phytochemical and physiological characteristics. Industrial Crops and Products, 2021, 163, 113338.	2.5	29
207	Formation and mechanisms of nano-metal oxide-biochar composites for pollutants removal: A review. Science of the Total Environment, 2021, 767, 145305.	3.9	89
208	Multifunctional applications of biochar beyond carbon storage. International Materials Reviews, 2022, 67, 150-200.	9.4	245
209	The Potential Application of Giant Reed (Arundo donax) in Ecological Remediation. Frontiers in Environmental Science, 2021, 9, .	1.5	13
210	Effects of aging on surface properties and endogenous copper and zinc leachability of swine manure biochar and its composite with alkali-fused fly ash. Waste Management, 2021, 126, 400-410.	3.7	18
211	The pathways of microplastics contamination in raw and drinking water. Journal of Water Process Engineering, 2021, 41, 102073.	2.6	10
212	Research progress and mechanism of nanomaterials-mediated in-situ remediation of cadmium-contaminated soil: A critical review. Journal of Environmental Sciences, 2021, 104, 351-364.	3.2	45
213	Effects of natural organic matter on cadmium mobility in paddy soil: A review. Journal of Environmental Sciences, 2021, 104, 204-215.	3.2	49
215	Biochar for the Management of Nutrient Impoverished and Metal Contaminated Soils: Preparation, Applications, and Prospects. Journal of Soil Science and Plant Nutrition, 2021, 21, 2191-2213.	1.7	32
216	Study of soil microorganisms modified wheat straw and biochar for reducing cadmium leaching potential and bioavailability. Chemosphere, 2021, 273, 129644.	4.2	42
217	The long-term effectiveness of ferromanganese biochar in soil Cd stabilization and reduction of Cd bioaccumulation in rice. Biochar, 2021, 3, 499-509.	6.2	29

#	Article	IF	Citations
218	Inoculation With Indigenous Rhizosphere Microbes Enhances Aboveground Accumulation of Lead in Salix integra Thunb. by Improving Transport Coefficients. Frontiers in Microbiology, 2021, 12, 686812.	1.5	13
219	Towards a Soil Remediation Strategy Using Biochar: Effects on Soil Chemical Properties and Bioavailability of Potentially Toxic Elements. Toxics, 2021, 9, 184.	1.6	29
220	Elemental and Thermo-gravimetric Characterization of Trace Metals in Leaves and Soils as Bioindicators of Pollution in Kyiv City. Water, Air, and Soil Pollution, 2021, 232, 331.	1.1	0
221	Simultaneous reduction and immobilization of Cr(VI) in seasonally frozen areas: Remediation mechanisms and the role of ageing. Journal of Hazardous Materials, 2021, 415, 125650.	6.5	37
222	Water hyacinth biochar and Aspergillus niger biomass amalgamation potential in removal of pollutants from polluted lake water. Journal of Environmental Chemical Engineering, 2021, 9, 105574.	3.3	23
223	Mitigation of petroleum-hydrocarbon-contaminated hazardous soils using organic amendments: A review. Journal of Hazardous Materials, 2021, 416, 125702.	6.5	46
224	Long-term effects of biochar on trace metals accumulation in rice grain: A 7-year field experiment. Agriculture, Ecosystems and Environment, 2021, 315, 107446.	2.5	19
225	Crop-residues derived biochar: Synthesis, properties, characterization and application for the removal of trace elements in soils. Journal of Hazardous Materials, 2021, 416, 126212.	6.5	37
226	Compost Quality and Sanitation on Industrial Scale Composting of Municipal Solid Waste and Sewage Sludge. Applied Sciences (Switzerland), 2021, 11, 7525.	1.3	11
227	Effect of a low-cost and highly efficient passivator synthesized by alkali-fused fly ash and swine manure on the leachability of heavy metals in a multi-metal contaminated soil. Chemosphere, 2021, 279, 130558.	4.2	6
228	Production and physico-chemical properties analysis of co-pyrolytic oil derived from co-pyrolysis of scrap tires and sawdust. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 0, , 1-13.	1.2	4
229	Soils and Beyond: Optimizing Sustainability Opportunities for Biochar. Sustainability, 2021, 13, 10079.	1.6	9
230	Polyamine-producing bacterium Bacillus megaterium N3 reduced Cd accumulation in wheat and increased the expression of DNA repair- and plant hormone- related proteins in wheat roots. Environmental and Experimental Botany, 2021, 189, 104563.	2.0	7
231	(Im)mobilization of arsenic, chromium, and nickel in soils via biochar: A meta-analysis. Environmental Pollution, 2021, 286, 117199.	3.7	40
232	Removal of heavy metals from soil with biochar composite: A critical review of the mechanism. Journal of Environmental Chemical Engineering, 2021, 9, 105830.	3.3	97
233	Remediation of zinc-contaminated soils by using the two-step washing with citric acid and water-soluble chitosan. Chemosphere, 2021, 282, 131092.	4.2	45
234	Biochar-based fertilizer enhanced Cd immobilization and soil quality in soil-rice system. Ecological Engineering, 2021, 171, 106396.	1.6	11
235	Current advances of functional phytochemicals in Nicotiana plant and related potential value of tobacco processing waste: A review. Biomedicine and Pharmacotherapy, 2021, 143, 112191.	2.5	24

#	Article	IF	Citations
236	Opening the black box: Soil microcosm experiments reveal soot black carbon short-term oxidation and influence on soil organic carbon mineralisation. Science of the Total Environment, 2021, 801, 149659.	3.9	0
237	Stable and efficient immobilization of lead and cadmium in contaminated soil by mercapto iron functionalized nanosilica. Chemical Engineering Journal, 2021, 426, 128483.	6.6	6
238	Nitric acid-modified hydrochar enhance Cd2+ sorption capacity and reduce the Cd2+ accumulation in rice. Chemosphere, 2021, 284, 131261.	4.2	12
239	Biochar as environmental armour and its diverse role towards protecting soil, water and air. Science of the Total Environment, 2022, 806, 150444.	3.9	63
240	Passivation of multiple heavy metals in leadâ€“zinc tailings facilitated by straw biochar-loaded N-doped carbon aerogel nanoparticles: Mechanisms and microbial community evolution. Science of the Total Environment, 2022, 803, 149866.	3.9	25
241	Effect of biochar-derived DOM on the interaction between Cu(II) and biochar prepared at different pyrolysis temperatures. Journal of Hazardous Materials, 2022, 421, 126739.	6.5	45
242	An assessment of integrated amendments of biochar and soil replacement on the phytotoxicity of metal(loid)s in rotated radish-soya bean-amaranth in a mining acidy soil. Chemosphere, 2022, 287, 132082.	4.2	16
243	Magnetic 2D/2D oxygen doped g-C3N4/biochar composite to activate peroxymonosulfate for degradation of emerging organic pollutants. Journal of Hazardous Materials, 2022, 423, 127207.	6.5	48
244	Contaminants in biochar and suggested mitigation measures â€“ a review. Chemical Engineering Journal, 2022, 429, 132287.	6.6	34
245	Mechanochemically incorporating magnesium sulfate into antigorite to provide active nucleation sites for efficient precipitation of cadmium ions from weak acidic solution. Journal of Hazardous Materials, 2022, 424, 127272.	6.5	6
246	Use of Biochar in Sustainable Agriculture. , 2019, , 501-528.		4
247	Decontamination of xenobiotics in water and soil environment through potential application of composite maize stover/rice husk (MS/RH) biocharâ€”a review. Environmental Science and Pollution Research, 2020, 27, 28679-28694.	2.7	12
248	Mechanisms and adsorption capacities of biochar for the removal of organic and inorganic pollutants from industrial wastewater. International Journal of Environmental Science and Technology, 2021, 18, 3273-3294.	1.8	287
249	The remediation of PAH contaminated sediment with mangrove plant and its derived biochars. Journal of Environmental Management, 2020, 268, 110410.	3.8	17
250	Influence of Iron-Enriched Biochar on Cd Sorption, Its Ionic Concentration and Redox Regulation of Radish under Cadmium Toxicity. Agriculture (Switzerland), 2021, 11, 1.	1.4	49
251	Review of Biochar Properties and Remediation of Metal Pollution of Water and Soil. Journal of Health and Pollution, 2020, 10, 200902.	1.8	34
252	Potential of rice straw biochar, sulfur and ryegrass (Lolium perenne L.) in remediating soil contaminated with nickel through irrigation with untreated wastewater. PeerJ, 2020, 8, e9267.	0.9	33
253	Sustainable Biochar Effects on the Bioavailability of Heavy Metals: A 2-Crop Season Site Practice Near a Lead-Zinc Smelter in Feng County, China. SSRN Electronic Journal, 0, , .	0.4	0

#	Article	IF	Citations
254	Biochar: A New Environmental Paradigm in Management of Agricultural Soils and Mitigation of GHG Emission. , 2020, , 223-258.		1
255	Application of Biotechnology for Restoration of Degraded Environs. , 2020, , 239-258.		0
256	Sustainable applications of rice feedstock in agro-environmental and construction sectors: A global perspective. Renewable and Sustainable Energy Reviews, 2022, 153, 111791.	8.2	78
257	Soils and Water. , 2020, , 33-49.		0
258	Biochar Amendment in Agricultural Soil for Mitigation of Abiotic Stress. , 2020, , 305-344.		1
259	Effect of biochar on the form transformation of heavy metals in paddy soil under different water regimes. Archives of Agronomy and Soil Science, 2023, 69, 387-398.	1.3	3
260	Mechanisms of copper immobilization in Fluvisol after the carbon sorbent applying. Eurasian Journal of Soil Science, 2020, 9, 356-361.	0.2	2
261	Evaluation of the Fuel Value and Soil Application Potential of the Cadmium Contaminated Biochar Obtained after Water Treatment. Solid Fuel Chemistry, 2020, 54, 411-417.	0.2	0
262	Impact of physiochemical properties, microbes and biochar on bioavailability of toxic elements in the soil: a review. Environmental Geochemistry and Health, 2022, 44, 3725-3742.	1.8	6
263	Sustainability assessment and carbon budget of chemical stabilization based multi-objective remediation of Cd contaminated paddy field. Science of the Total Environment, 2022, 819, 152022.	3.9	18
264	Interactions between biochar, arbuscular mycorrhizal fungi and photosynthetic processes in potato (Solanum tuberosum L.). Science of the Total Environment, 2022, 816, 151649.	3.9	8
265	High-efficient removal of Cu(II) using biochar/ZnS composite: optimized by response surface methodology. Journal of Dispersion Science and Technology, 0, , 1-11.	1.3	0
266	Water and soil contaminated by arsenic: the use of microorganisms and plants in bioremediation. Environmental Science and Pollution Research, 2022, 29, 9462-9489.	2.7	6
267	Remediation of heavy metal contaminated soil: Role of biochar. Advances in Chemical Pollution, Environmental Management and Protection, 2021, 7, 39-63.	0.3	2
268	Biochar: A Futuristic Tool to Remove Heavy Metals from Contaminated Soils. , 2021, , 231-258.		2
269	Design of Z-scheme g-C3N4/BC/Bi25FeO40 photocatalyst with unique electron transfer channels for efficient degradation of tetracycline hydrochloride waste. Chemosphere, 2022, 289, 133262.	4.2	28
270	Effects of different feedstocks-based biochar on soil remediation: A review. Environmental Pollution, 2022, 294, 118655.	3.7	116
271	Iron oxide nanoparticles doped biochar ameliorates trace elements induced phytotoxicity in tomato by modulation of physiological and biochemical responses: Implications for human health risk. Chemosphere, 2022, 289, 133203.	4.2	13

#	Article	IF	Citations
272	Investigation on the potential of eco-friendly bio-char for amendment in serpentine soils and immobilization of heavy metals contaminants: a review. Biomass Conversion and Biorefinery, 0, , 1.	2.9	3
273	Biochar reduces the toxicity of silver to barley (Hordeum vulgare) and springtails (Folsomia candida) in a natural soil. Environmental Science and Pollution Research, 2022, , 1.	2.7	2
274	Silicon fertilizers, humic acid and their impact on physicochemical properties, availability and distribution of heavy metals in soil and soil aggregates. Science of the Total Environment, 2022, 822, 153483.	3.9	51
275	Role of nanotechnology in enhancing crop production and produce quality. , 2022, , 703-764.		3
276	Biochar impacts on the soil environment of soybean root systems. Science of the Total Environment, 2022, 821, 153421.	3.9	13
277	Optimizing pyrolysis temperature of contaminated rice straw biochar: Heavy metal(loid) deportment, properties evolution, and Pb adsorption/immobilization. Journal of Saudi Chemical Society, 2022, 26, 101439.	2.4	18
278	Effects of biochar dose on cadmium accumulation in spinach and its fractionation in a calcareous soil. Arabian Journal of Geosciences, 2022, 15, 1.	0.6	8
279	Biochar from Biomass: A Review on Biochar Preparation Its Modification and Impact on Soil Including Soil Microbiology. Geomicrobiology Journal, 2022, 39, 373-388.	1.0	9
280	Influence of biochar remediation on Eisenia fetida in Pb-contaminated soils. Chemosphere, 2022, 295, 133954.	4.2	15
281	Binding Characteristics of Copper Onto Biochar-Derived Dom Using General, Heterospectral and Moving-Window Two-Dimensional Correlation Analyses. SSRN Electronic Journal, 0, , .	0.4	0
282	Fate and Mechanistic Insights into Nanoscale Zerovalent Iron (Nzvi) Activation of Sludge Derived Biochar Reacted with Cr(Vi). SSRN Electronic Journal, 0, , .	0.4	0
283	Characterisation of biochar produced from two types of chestnut shells for use in remediation of cadmium- and lead-contaminated soil. Crop and Pasture Science, 2022, 74, 147-156.	0.7	9
285	Radioactive waste treatment technology: a review. Kerntechnik, 2022, 87, 208-225.	0.2	14
286	Cadmium Exposure Alters Rhizospheric Microbial Community and Transcriptional Expression of Vetiver Grass. Frontiers in Plant Science, 2022, 13, 808844.	1.7	2
287	Preparation and evaluation of two enriched biochar-based fertilizers for nutrient release kinetics and agronomic effectiveness in direct-seeded rice. Biomass Conversion and Biorefinery, 2024, 14, 2007-2018.	2.9	3
288	Application of microbe-impregnated tannery solid waste biochar in soil enhances growth performance of sunflower. Environmental Science and Pollution Research, 2022, 29, 57669-57687.	2.7	7
289	Soil health and crop response of biochar: an updated analysis. Archives of Agronomy and Soil Science, 2023, 69, 1085-1110.	1.3	16
290	Mitigation of cadmium uptake in Theobroma cacao L: efficacy of soil application methods of hydrated lime and biochar. Plant and Soil, 2022, 477, 281-296.	1.8	4

#	Article	IF	Citations
291	Biomodification of feedstock for quality-improved biochar: A green method to enhance the Cd sorption capacity of Miscanthus lutarioriparius-derived biochar. Journal of Cleaner Production, 2022, 350, 131241.	4.6	24
292	Sustainable biochar effects on the remediation of contaminated soil: A 2-crop season site practice near a lead-zinc smelter in Feng County, China. Environmental Pollution, 2022, 302, 119095.	3.7	5
293	Characterization of organophosphate pesticide sorption of potato peel biochar as low cost adsorbent for chlorpyrifos removal. Chemosphere, 2022, 297, 134112.	4.2	25
294	Combined effects of temperature and nutrients on the toxicity of cadmium in duckweed (Lemna) Tj ETQq1 1 0.784314 rgBT /Overloc	6.5	8
295	Biochar mitigates bioavailability and environmental risks of arsenic in gold mining tailings from the eastern Amazon. Journal of Environmental Management, 2022, 311, 114840.	3.8	14
296	Biochar-based composites for remediation of polluted wastewater and soil environments: Challenges and prospects. Chemosphere, 2022, 297, 134163.	4.2	57
297	Enhanced immobilization of cadmium and lead adsorbed on crop straw biochars by simulated aging processes. Environmental Pollution, 2022, 302, 119064.	3.7	23
298	Use of superabsorbent polymer in soil-cement subsurface barriers for enhanced heavy metal sorption and self-healing. Science of the Total Environment, 2022, 831, 154708.	3.9	9
299	Natural field freeze-thaw process leads to different performances of soil amendments towards Cd immobilization and enrichment. Science of the Total Environment, 2022, 831, 154880.	3.9	18
300	The application of machine learning methods for prediction of metal immobilization remediation by biochar amendment in soil. Science of the Total Environment, 2022, 829, 154668.	3.9	30
301	Biochar as a potential strategy for remediation of contaminated mining soils: Mechanisms, applications, and future perspectives. Journal of Environmental Management, 2022, 313, 114973.	3.8	53
302	Sequential Removal of Oppositely Charged Multiple Compounds from Water Using Surface-Modified Cellulose. Industrial & Engineering Chemistry Research, 2022, 61, 716-726.	1.8	1
303	A Critical-Systematic Review of the Interactions of Biochar with Soils and the Observable Outcomes. Sustainability, 2021, 13, 13726.	1.6	18
304	Kinetic and equilibrium studies on the zinc adsorptionâ€“desorption characteristics of some promising biochars in aqueous solutions. Arabian Journal of Geosciences, 2022, 15, .	0.6	1
305	Effects of the increases in soil pH and pH buffering capacity induced by crop residue biochars on available Cd contents in acidic paddy soils. Chemosphere, 2022, 301, 134674.	4.2	38
306	Pyrolysis Temperature Affects the Inhibitory Mechanism of Biochars on the Mobility of Extracellular Antibiotic Resistance Genes in Saturated Porous Media. SSRN Electronic Journal, 0, , .	0.4	0
307	The mechanism of Cd sorption by silkworm excrement organic fertilizer and its effect on Cd accumulation in rice. Journal of Soils and Sediments, 2022, 22, 2184-2195.	1.5	9
308	Field-scale fluorescence fingerprints of biochar-derived dissolved organic matter (DOM) provide an effective way to trace biochar migration and the downward co-migration of Pb, Cu and As in soil. Chemosphere, 2022, 301, 134738.	4.2	17

#	Article	IF	Citations
309	Biochar derived from non-customized matamba fruit shell as an adsorbent for wastewater treatment. Journal of Bioresources and Bioproducts, 2022, 7, 109-115.	11.8	100
310	Effects of biochar and polypropylene fibre on mechanical behaviour of cementâ€solidified sludge. Soil Use and Management, 2022, 38, 1667-1678.	2.6	2
311	Biocharsâ€™ potential role in the remediation, revegetation, and restoration of contaminated soils. , 2022, , 381-399.		0
312	Multi-Component Passivators Regulate Heavy Metal Accumulation in Paddy Soil and Rice: A Three-Site Field Experiment in South China. Toxics, 2022, 10, 259.	1.6	2
313	Chemical food safety hazards in circular food systems: a review. Critical Reviews in Food Science and Nutrition, 2023, 63, 10319-10331.	5.4	10
314	Assessment of remediation of soils, moderately contaminated by potentially toxic metals, using different forms of carbon (charcoal, biochar, activated carbon). Impacts on contamination, metals availability and soil indices. Sustainable Chemistry and Pharmacy, 2022, 28, 100724.	1.6	8
315	Legacy Lead in Urban Garden Soils: Communicating Risk and Limiting Exposure. Frontiers in Ecology and Evolution, 0, 10, .	1.1	9
316	Effective alleviation of Cd stress to microbial communities in mining reclamation soils by thiourea-modified biochar amendment. Pedosphere, 2022, 32, 866-875.	2.1	3
317	Biochar and its potential use for bioremediation of contaminated soils. , 2022, , 169-183.		1
318	Reducing cadmium bioaccumulation in Theobroma cacao using biochar: basis for scaling-up to field. Heliyon, 2022, 8, e09790.	1.4	15
319	Insight into modified biochars and their immobilizing effects on heavy metal(loid)s in contaminated soils: Mechanisms and influencing factors. Pedosphere, 2023, 33, 23-33.	2.1	6
320	Choose your amendment wisely: Zero-valent iron nanoparticles offered no advantage over microparticles in a laboratory study on metal immobilization in a contaminated soil. Applied Geochemistry, 2022, 143, 105369.	1.4	3
321	PPCPs and heavy metals from hydrothermal sewage sludge-derived biochar: migration in wheat and physiological response. Environmental Science and Pollution Research, 2022, 29, 83234-83246.	2.7	3
322	Adsorption of methylene blue by bismuth impregnated biochar of different biomass materials: pore structure and surface chemistry characteristics. Journal of Chemical Technology and Biotechnology, 2022, 97, 2871-2880.	1.6	5
323	The combined application of Î³-PGA-producing bacteria and biochar reduced the content of heavy metals and improved the quality of tomato (Solanum lycopersicum L.). Environmental Science and Pollution Research, 2022, 29, 88938-88950.	2.7	9
324	Effects of biochar application on the loss characteristics of Cd from acidic soil under simulated rainfall conditions. Environmental Science and Pollution Research, 2022, 29, 83969-83980.	2.7	3
325	Biochar, Ochre, and Manure Maturation in an Acidic Technosol Helps Stabilize As and Pb in Soil and Allows Its Vegetation by Salix triandra. Environments - MDPI, 2022, 9, 87.	1.5	1
326	Carbon-based strategy enables sustainable remediation of paddy soils in harmony with carbon neutrality. , 2022, 1, .		39

#	Article	IF	Citations
327	The interactions of Cr (VI) concentrations and amendments (biochar and manure) on growth and metal accumulation of two species of Salicornia in contaminated soil. Environmental Science and Pollution Research, 2023, 30, 201-218.	2.7	3
328	Pyrolysis temperature affects the inhibitory mechanism of biochars on the mobility of extracellular antibiotic resistance genes in saturated porous media. Journal of Hazardous Materials, 2022, 439, 129668.	6.5	1
329	Precise and differentiated solutions for safe usage of Cd-polluted paddy fields at regional scale in southern China: Technical methods and field validation. Journal of Hazardous Materials, 2022, 439, 129599.	6.5	4
330	Stability and interaction of biochar and iron Âmineral nanoparticles: effect of pH, ionic strength, and dissolved organic matter. Biochar, 2022, 4, .	6.2	5
331	Proposition of critical thresholds for copper and zinc transfer to solution in soils. Environmental Monitoring and Assessment, 2022, 194, .	1.3	0
333	Biochar rebuilds the network complexity of rare and abundant microbial taxa in reclaimed soil of mining areas to cooperatively avert cadmium stress. Frontiers in Microbiology, 0, 13, .	1.5	2
334	Iron-doped hydroxyapatite for the simultaneous remediation of lead-, cadmium- and arsenic-co-contaminated soil. Environmental Pollution, 2022, 312, 119953.	3.7	22
336	Combined application of biochar and nano-zeolite enhanced cadmium immobilization and promote the growth of Pak Choi in cadmium contaminated soil. NanoImpact, 2022, 28, 100421.	2.4	13
337	A review on N-doped biochar for enhanced water treatment and emerging applications. Fuel Processing Technology, 2022, 237, 107468.	3.7	23
338	Engineered Biochar as Adsorbent for Removal of Heavy Metals from Soil Medium. , 2022, , 151-170.		1
339	Biochar as an Emerging Amendment for Remediation of Heavy Metals-Contaminated Soil. , 2022, , 445-485.		0
340	Silicon-Induced Tolerance against Arsenic Toxicity by Activating Physiological, Anatomical and Biochemical Regulation in Phoenix dactylifera (Date Palm). Plants, 2022, 11, 2263.	1.6	4
341	Applications and Data Analysis using Bayesian and Conventional Statistics in Biochar Adsorption Studies for Environmental Protection. , 0, , .		0
342	Effect of soil application of biochar produced from Cd-enriched maize on the available Cd in a calcareous soil. Environmental Earth Sciences, 2022, 81, .	1.3	3
343	Biochar Shifts the Negative Effect of N Addition on Lotus corniculatus L. Growth in TEs Contaminated Soil, Regardless of Exogenous Arbuscular Mycorrhizal Fungi Inoculation. Journal of Soil Science and Plant Nutrition, 2022, 22, 4883-4896.	1.7	1
344	Effects of Carbonaceous Materials with Different Structures on Cadmium Fractions and Microecology in Cadmium-Contaminated Soils. International Journal of Environmental Research and Public Health, 2022, 19, 12381.	1.2	1
345	Phosphorus adsorption by functionalized biochar: a review. Environmental Chemistry Letters, 2023, 21, 497-524.	8.3	82
346	A critical review on biochar-assisted free radicals mediated redox reactions influencing transformation of potentially toxic metals: Occurrence, formation, and environmental applications. Environmental Pollution, 2022, 315, 120335.	3.7	10

#	Article	IF	Citations
347	Evaluation of prina for use in asphalt modification. Case Studies in Construction Materials, 2022, 17, e01623.	0.8	4
348	Development of a Unique Technology for the Pyrolysis of Rice Husk Biochar for Promising Heavy Metal Remediation. Agriculture (Switzerland), 2022, 12, 1689.	1.4	6
349	In situ phytostabilization of arable soils severely contaminated with cadmium at Yangshuo, Southern China, using cash crops and amendments: a comprehensive performance evaluation. Journal of Soils and Sediments, 2023, 23, 817-830.	1.5	2
350	Steering restoration of coal mining degraded ecosystem to achieve sustainable development goal-13 (climate action): United Nations decade of ecosystem restoration (2021â€“2030). Environmental Science and Pollution Research, 2022, 29, 88383-88409.	2.7	9
351	Potential application of spent mushroom compost (SMC) biochar as low-cost filtration media in heavy metal removal from abandoned mining water: a review. International Journal of Environmental Science and Technology, 0, , .	1.8	0
352	Effect of Carbon Nanoparticles in Biochar and Sulphur as aÂFoliar Spray on Onion Plants: AÂNew Orientation. Gesunde Pflanzen, 0, , .	1.7	4
353	Preparing of layered double hydroxide- alginate microspheres for Cr(VI)-contaminated soil remediation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 658, 130655.	2.3	4
354	Conditional remediation performance of wheat straw biochar on three typical Cd-contaminated soils. Science of the Total Environment, 2023, 863, 160998.	3.9	12
355	Chemical Fractionations of Lead and Zinc in the Contaminated Soil Amended with the Blended Biochar/Apatite. Molecules, 2022, 27, 8044.	1.7	3
357	Effects of malic acid and EDTA on oxidative stress and antioxidant enzymes of okra (Abelmoschus) Tj ETQq1 1 0.784314 rgBT /Overlo	2.9	8
358	Combined toxicity of Cd and 2,4-dichlorophenoxyacetic acid on the earthworm Eisenia andrei under biochar amendment. Environmental Science and Pollution Research, 2023, 30, 34915-34931.	2.7	5
359	Global perspectives for biochar application in the remediation of heavy metal-contaminated soil: a bibliometric analysis over the past three decades. International Journal of Phytoremediation, 0, , 1-15.	1.7	1
360	Field verification of low-level biochar applications as effective ameliorants to mitigate cadmium accumulation into Brassica campestris L from polluted soils. Frontiers in Environmental Science, 0, 10, .	1.5	0
361	Responses of soil microbial communities to manure and biochar in wheat cultivation of a rice-wheat rotation agroecosystem in East China. Pedosphere, 2023, 33, 893-904.	2.1	1
363	Symbiosis Mechanisms and Usage of Other Additives Like Biochar in Soil Quality Management. Climate Change Management, 2023, , 271-305.	0.6	0
364	Chlorine Removal from Water by Biochar Derived from Various Food Waste Natural Materials. Environmental Processes, 2023, 10, .	1.7	1
365	Sustainability assessment of biochar applications. , 2023, , 415-441.		0
366	Fabrication of biochar derived from different types of feedstocks as an efficient adsorbent for soil heavy metal removal. Scientific Reports, 2023, 13, .	1.6	14

#	Article	IF	Citations
367	Biochar as a negative emission technology: A synthesis of field research on greenhouse gas emissions. Journal of Environmental Quality, 2023, 52, 769-798.	1.0	2
368	Earthworm-mediated nitrification and gut digestive processes facilitate the remobilization of biochar-immobilized heavy metals. Environmental Pollution, 2023, 322, 121219.	3.7	5
369	Detrimental effects of Cd and temperature on rice and functions of microbial community in paddy soils. Environmental Pollution, 2023, 324, 121371.	3.7	5
370	Effects of physical aging processes on the bioavailability of heavy metals in contaminated site soil amended with chicken manure and wheat straw biochars. Environmental Pollution, 2023, 324, 121414.	3.7	11
371	Phosphorus-enriched biochar for the remediation of heavy metal contaminated soil. Journal of Agriculture and Food Research, 2023, 12, 100546.	1.2	0
372	New insights into the bioremediation of petroleum contaminants: A systematic review. Chemosphere, 2023, 326, 138391.	4.2	10
373	Facilitated remediation of heavy metals contaminated land using Quercus spp. with different strategies: Variations in amendments and experiment periods. Science of the Total Environment, 2023, 876, 163245.	3.9	3
374	Advances and prospects of biochar in improving soil fertility, biochemical quality, and environmental applications. Frontiers in Environmental Science, 0, 11, .	1.5	17
375	Application of biogas-slurry and biochar improves soil multifunctionality in a poplar plantation during afforestation processes. Plant and Soil, 0, , .	1.8	4
376	Sustainable remediation and redevelopment of brownfield sites. Nature Reviews Earth & Environment, 2023, 4, 271-286.	12.2	46
377	Nickel (Ni) phytotoxicity and detoxification mechanisms: A review. Chemosphere, 2023, 328, 138574.	4.2	26
378	Exploring the relationship between soil thermal conductivity and frostbite prevention: a comprehensive modeling and experimental approach. Modeling Earth Systems and Environment, 2024, 10, 45-59.	1.9	1
379	Recent Advances in Nano-metal Oxide-Biochar Composites for Efficient Removal of Environmental Contaminants. Reviews of Environmental Contamination and Toxicology, 2023, 261, .	0.7	0
389	Production, characteristics and applications of biochar for environmental sustainability. , 2023, , 197-214.		0
396	Modified Biochar for Arsenic Immobilization in Soil: A Critical Review. Reviews of Environmental Contamination and Toxicology, 2023, 261, .	0.7	1
397	Microbial responses towards biochar application in potentially toxic element (PTE) contaminated soil: a critical review on effects and potential mechanisms. Biochar, 2023, 5, .	6.2	2
413	Strategies for reducing toxic metal(loid)s in edible crop parts. , 2024, , 131-188.		0
418	Biocharâ€™s effect on soil properties. , 2024, , 45-80.		0

#	Article	IF	Citations
422	Long-term stability of heavy metals in biochar-treated soil. , 2024, , 131-162.		0
423	Sustainable remediation techniques for solid waste polluted soils. , 2024, , 265-288.		0
424	Role of endophytes in bioremediation of heavy metals. , 2024, , 149-169.		0
425	The role of biochar and compost to mitigate agrochemical contamination impact on agricultural soils. AIP Conference Proceedings, 2024, , .	0.3	0