Effect of biochar on the extractability of heavy metals (C activity in soil

Environmental Science and Pollution Research

23, 974-984

DOI: 10.1007/s11356-015-4233-0

Citation Report

#	Article	IF	Citations
1	Research and Application of Biochar in China. SSSA Special Publication Series, 2015, , 377-407.	0.2	9
2	Determining soil enzyme activities for the assessment of fungi and citric acid-assisted phytoextraction under cadmium and lead contamination. Environmental Science and Pollution Research, 2015, 22, 19860-19869.	2.7	23
3	Laboratory Evaluation of Metal Elements Urease Inhibitor and DMPP Nitrification Inhibitor on Nitrogenous Gas Losses in Selected Rice Soils. Water, Air, and Soil Pollution, 2016, 227, 1.	1.1	13
4	Heavy Metal and Their Regulation in Plant System: An Overview. , 2016, , 19-38.		17
5	Brownfields to green fields: Realising wider benefits from practical contaminant phytomanagement strategies. Journal of Environmental Management, 2016, 184, 67-77.	3.8	131
6	Effects of alkaline and bioorganic amendments on cadmium, lead, zinc, and nutrient accumulation in brown rice and grain yield in acidic paddy fields contaminated with a mixture of heavy metals. Environmental Science and Pollution Research, 2016, 23, 23551-23560.	2.7	19
7	Influence of pyrolysis temperature on lead immobilization by chemically modified coconut fiber-derived biochars in aqueous environments. Environmental Science and Pollution Research, 2016, 23, 22890-22896.	2.7	67
8	Effect of biochar application on mineral and microbial properties of soils growing different plant species. Soil Science and Plant Nutrition, 2016, 62, 519-525.	0.8	21
9	Influence of biochars, compost and iron grit, alone and in combination, on copper solubility and phytotoxicity in a Cu-contaminated soil from a wood preservation site. Science of the Total Environment, 2016, 566-567, 816-825.	3.9	71
10	Mechanisms of biochar-mediated alleviation of toxicity of trace elements in plants: a critical review. Environmental Science and Pollution Research, 2016, 23, 2230-2248.	2.7	366
11	Bioavailability of Cd and Zn in soils treated with biochars derived from tobacco stalk and dead pigs. Journal of Soils and Sediments, 2017, 17, 751-762.	1.5	133
12	Effect of bamboo and rice straw biochars on the mobility and redistribution of heavy metals (Cd, Cu,) Tj ETQq1 1 0.784314 rgBT /Ove	3.8	471
13	Mitigating cadmium accumulation in greenhouse lettuce production using biochar. Environmental Science and Pollution Research, 2017, 24, 6532-6542.	2.7	27
14	Biological technologies for the remediation of co-contaminated soil. Critical Reviews in Biotechnology, 2017, 37, 1062-1076.	5.1	423
15	Streptomyces pactum assisted phytoremediation in Zn/Pb smelter contaminated soil of Feng County and its impact on enzymatic activities. Scientific Reports, 2017, 7, 46087.	1.6	37
16	Humic substances as a washing agent for Cd-contaminated soils. Chemosphere, 2017, 181, 461-467.	4.2	79
17	Effects and mechanisms of biochar-microbe interactions in soil improvement and pollution remediation: A review. Environmental Pollution, 2017, 227, 98-115.	3.7	634
18	Role of biochar on composting of organic wastes and remediation of contaminated soilsâ€"a review. Environmental Science and Pollution Research, 2017, 24, 16560-16577.	2.7	176

#	Article	IF	Citations
19	Seed priming with <scp>KNO₃</scp> mediates biochemical processes to inhibit lead toxicity in maize (Zea mays L.). Journal of the Science of Food and Agriculture, 2017, 97, 4780-4789.	1.7	28
20	Combined bioremediation for lead in mine tailings by Solanum nigrum L. and indigenous fungi. Chemistry and Ecology, 2017, 33, 932-948.	0.6	10
21	Proper land use for heavy metal-polluted soil based on enzyme activity analysis around a Pb-Zn mine in Feng County, China. Environmental Science and Pollution Research, 2017, 24, 28152-28164.	2.7	50
22	Adsorptive Removal of Bisphenol A Using N-Doped Biochar Made of Ulva prolifera. Water, Air, and Soil Pollution, 2017, 228, 1.	1.1	38
23	Biosorption of cadmium(II), lead(II) and cobalt(II) from aqueous solution by biochar from cones of larch (Larix decidua Mill. subsp. decidua) and spruce (Picea abies L. H. Karst). Environmental Earth Sciences, 2017, 76, 1.	1.3	13
24	Potential of miscanthus biochar to improve sandy soil health, in situ nickel immobilization in soil and nutritional quality of spinach. Chemosphere, 2017, 185, 1144-1156.	4.2	55
25	In situ immobilization of Cd by organic amendments and their effect on antioxidant enzyme defense mechanism in mung bean (Vigna radiata L.) seedlings. Plant Physiology and Biochemistry, 2017, 118, 561-570.	2.8	29
26	Effect of wheat and Miscanthus straw biochars on soil enzymatic activity, ecotoxicity, and plant yield. International Agrophysics, 2017, 31, 367-375.	0.7	27
27	Using bamboo biochar with compost for the stabilization and phytotoxicity reduction of heavy metals in mine-contaminated soils of China. Scientific Reports, 2017, 7, 2690.	1.6	96
28	Unraveling sorption of lead in aqueous solutions by chemically modified biochar derived from coconut fiber: A microscopic and spectroscopic investigation. Science of the Total Environment, 2017, 576, 766-774.	3.9	172
29	Impact of salinity and Pb on enzyme activities of a saline soil from the Yellow River delta: A microcosm study. Physics and Chemistry of the Earth, 2017, 97, 77-87.	1.2	29
30	Use of Biochar as an Amendment for Remediation of Heavy Metal-Contaminated Soils: Prospects and Challenges. Pedosphere, 2017, 27, 991-1014.	2.1	139
31	Thermal Properties of Biochars Derived from Waste Biomass Generated by Agricultural and Forestry Sectors. Energies, 2017, 10, 469.	1.6	69
32	Influence of Nano-Hydroxyapatite on the Metal Bioavailability, Plant Metal Accumulation and Root Exudates of Ryegrass for Phytoremediation in Lead-Polluted Soil. International Journal of Environmental Research and Public Health, 2017, 14, 532.	1.2	48
33	Corn Cob Biochar Improves Aggregate Characteristics of a Tropical Sandy Loam. Soil Science Society of America Journal, 2017, 81, 1054-1063.	1.2	21
34	Impact of sugarcane bagasse-derived biochar on heavy metal availability and microbial activity: A field study. Chemosphere, 2018, 200, 274-282.	4.2	254
35	Biochar alleviates the toxicity of imidacloprid and silver nanoparticles (AgNPs) to Enchytraeus albidus (Oligochaeta). Environmental Science and Pollution Research, 2018, 25, 10937-10945.	2.7	11
36	Maize productivity, heavy metals uptake and their availability in contaminated clay and sandy alkaline soils as affected by inorganic and organic amendments. Chemosphere, 2018, 204, 514-522.	4.2	74

#	Article	IF	Citations
37	Effects of biochar amendments on speciation and bioavailability of heavy metals in coal-mine-contaminated soil. Human and Ecological Risk Assessment (HERA), 2018, 24, 1887-1900.	1.7	52
38	Contrasting effects of biochar on phosphorus dynamics and bioavailability in different soil types. Science of the Total Environment, 2018, 627, 963-974.	3.9	113
39	Bamboo- and pig-derived biochars reduce leaching losses of dibutyl phthalate, cadmium, and lead from co-contaminated soils. Chemosphere, 2018, 198, 450-459.	4.2	121
40	Kinetic and isothermal adsorption-desorption of PAEs on biochars: effect of biomass feedstock, pyrolysis temperature, and mechanism implication of desorption hysteresis. Environmental Science and Pollution Research, 2018, 25, 11493-11504.	2.7	41
41	Response of soil microbial communities to red mud-based stabilizer remediation of cadmium-contaminated farmland. Environmental Science and Pollution Research, 2018, 25, 11661-11669.	2.7	16
42	Using Biochar for Remediation of Contaminated Soils. , 2018, , 763-783.		4
43	Grey relational analysis for evaluating the effects of different rates of wine lees-derived biochar application on a plantâ€“soil system with multi-metal contamination. Environmental Science and Pollution Research, 2018, 25, 6990-7001.	2.7	13
44	Effects of biochar application in forest ecosystems on soil properties and greenhouse gas emissions: a review. Journal of Soils and Sediments, 2018, 18, 546-563.	1.5	287
45	Assisted phytostabilization of a multicontaminated mine technosol using biochar amendment: Early stage evaluation of biochar feedstock and particle size effects on As and Pb accumulation of two Salicaceae species (Salix viminalis and Populus euramericana). Chemosphere, 2018, 194, 316-326.	4.2	57
46	Effects of bamboo biochar on soybean root nodulation in multi-elements contaminated soils. Ecotoxicology and Environmental Safety, 2018, 150, 62-69.	2.9	52
47	Comparative analysis biochar and compost-induced degradation of di-(2-ethylhexyl) phthalate in soils. Science of the Total Environment, 2018, 625, 987-993.	3.9	65
48	Comparative study on effects of four energy plants growth on chemical fractions of heavy metals and activity of soil enzymes in copper mine tailings. International Journal of Phytoremediation, 2018, 20, 616-623.	1.7	15
49	Advances in research on the use of biochar in soil for remediation: a review. Journal of Soils and Sediments, 2018, 18, 2433-2450.	1.5	94
50	Biochar, wood ash and humic substances mitigating trace elements stress in contaminated sandy loam soil: Evidence from an integrative approach. Chemosphere, 2018, 203, 228-238.	4.2	42
51	Humic substances, their microbial interactions and effects on biological transformations of organic pollutants in water and soil: A review. Chemosphere, 2018, 202, 420-437.	4.2	236
52	Changes in heavy metal bioavailability and speciation from a Pb-Zn mining soil amended with biochars from co-pyrolysis of rice straw and swine manure. Science of the Total Environment, 2018, 633, 300-307.	3.9	198
53	Effects of metal ions and pH on ofloxacin sorption to cassava residue-derived biochar. Science of the Total Environment, 2018, 616-617, 1384-1391.	3.9	74
54	Effect of peanut shell and wheat straw biochar on the availability of Cd and Pb in a soilâ€“rice (Oryza) Tj ETQq1 1 0.784314 rgBT /Ove	2.7	55

#	Article	IF	Citations
55	Characterization of pig manure-derived hydrochars for their potential application as fertilizer. Environmental Science and Pollution Research, 2018, 25, 25772-25779.	2.7	34
56	Phosphorus-loaded biochar changes soil heavy metals availability and uptake potential of maize (Zea) Tj ETQq1 1 0.784314 rgBT /Ove	4.2	136
57	Biochar application for the remediation of heavy metal polluted land: A review of in situ field trials. Science of the Total Environment, 2018, 619-620, 815-826.	3.9	429
58	Biochar modulates heavy metal toxicity and improves microbial carbon use efficiency in soil. Science of the Total Environment, 2018, 621, 148-159.	3.9	181
59	Biochar effects on uptake of cadmium and lead by wheat in relation to annual precipitation: a 3-year field study. Environmental Science and Pollution Research, 2018, 25, 3368-3377.	2.7	48
60	Reduction of Cd accumulation in pak choi (Brassica chinensisÂL.) in consecutive growing seasons using mercapto-grafted palygorskite. RSC Advances, 2018, 8, 32084-32094.	1.7	19
61	Bioavailability and leaching of Cd and Pb from contaminated soil amended with different sizes of biochar. Royal Society Open Science, 2018, 5, 181328.	1.1	38
62	Biochar and Soil Remediation. , 2018, , 85-99.		0
63	Distribution and transformation of lead in rice plants grown in contaminated soil amended with biochar and lime. Ecotoxicology and Environmental Safety, 2018, 165, 589-596.	2.9	36
64	Fodder radish seed cake biochar for soil amendment. Environmental Science and Pollution Research, 2018, 25, 25143-25154.	2.7	10
65	Assessment of the Remediation Effect of Nano-hydroxyapatite in Exogenous Pb-contaminated Soil Using Toxicity Characteristic Leaching Procedure and Soil Enzyme Activities. Bulletin of Environmental Contamination and Toxicology, 2018, 101, 250-256.	1.3	5
66	A rapid-test for screening biochar effects on seed germination. Communications in Soil Science and Plant Analysis, 2018, 49, 2025-2041.	0.6	14
67	Immobilization of soil cadmium using combined amendments of illite/smectite clay with bone chars. Environmental Science and Pollution Research, 2018, 25, 20723-20731.	2.7	14
68	Sequential extraction of nickel and zinc in sewage sludge- or biochar/sewage sludge-amended soil. Science of the Total Environment, 2018, 636, 927-935.	3.9	43
69	Effect of biochar from peanut shell on speciation and availability of lead and zinc in an acidic paddy soil. Ecotoxicology and Environmental Safety, 2018, 164, 554-561.	2.9	56
70	New Application of Waste Citrus Maxima Peel-Derived Carbon as an Oxygen Electrode Material for Lithium Oxygen Batteries. ACS Applied Materials & Interfaces, 2018, 10, 32058-32066.	4.0	25
71	Biochar Effects on Rice Paddy: Meta-analysis. Advances in Agronomy, 2018, , 1-32.	2.4	35
72	Effect of sulfur-iron modified biochar on the available cadmium and bacterial community structure in contaminated soils. Science of the Total Environment, 2019, 647, 1158-1168.	3.9	194

#	Article	IF	Citations
73	Partitioning biochar properties to elucidate their contributions to bacterial and fungal community composition of purple soil. Science of the Total Environment, 2019, 648, 1333-1341.	3.9	46
74	Biochar reduced soil extractable Cd but increased its accumulation in rice (Oryza sativa L.) cultivated on contaminated soils. Journal of Soils and Sediments, 2019, 19, 862-871.	1.5	22
75	A sustainable ferromanganese biochar adsorbent for effective levofloxacin removal from aqueous medium. Chemosphere, 2019, 237, 124464.	4.2	127
76	Phosphorusâ€Rich Biochars Can Transform Lead in an Urban Contaminated Soil. Journal of Environmental Quality, 2019, 48, 1091-1099.	1.0	53
77	Effects of biochar on the growth of apple seedlings, soil enzyme activities and fungal communities in replant disease soil. Scientia Horticulturae, 2019, 256, 108641.	1.7	63
78	Effects of biochar amendments on soil phosphorus transformation in agricultural soils. Advances in Agronomy, 2019, 158, 131-172.	2.4	56
79	Agroecotoxicological Aspect of Arsenic (As) and Cadmium (Cd) on Field Crops and its Mitigation: Current Status and Future Prospect. , 2019, , 217-246.		15
80	Chlorine weaken the immobilization of Cd in soil-rice systems by biochar. Chemosphere, 2019, 235, 1172-1179.	4.2	27
81	Effect of Biochar Application Rates on the Hydraulic Properties of an Agricultural-Use Boreal Podzol. Soil Systems, 2019, 3, 53.	1.0	8
82	Application of wood biochar in polluted soils stabilized the toxic metals and enhanced wheat (Triticum aestivum) growth and soil enzymatic activity. Ecotoxicology and Environmental Safety, 2019, 184, 109635.	2.9	56
83	Floating duckweed mitigated ammonia volatilization and increased grain yield and nitrogen use efficiency of rice in biochar amended paddy soils. Chemosphere, 2019, 237, 124532.	4.2	38
84	Ecological restoration of heavy metal-contaminated soil using Na-bentonite and green compost coupled with the cultivation of the grass Festuca arundinacea. Ecological Engineering, 2019, 138, 420-433.	1.6	12
85	Multi-walled Carbon Nanotubes Modified Screen-Printed Electrode Coated Bismuth Oxide Nanoparticle for Rapid Detection of Cd(II) and Pb(II). International Journal of Electrochemical Science, 2019, 14, 6154-6167.	0.5	4
86	Can biochar and oxalic acid alleviate the toxicity stress caused by polycyclic aromatic hydrocarbons in soil microbial communities?. Science of the Total Environment, 2019, 695, 133879.	3.9	21
87	Application of Rice Grain Husk Derived Biochar in Ameliorating Toxicity Impacts of Cu and Zn on Growth, Physiology and Enzymatic Functioning of Wheat Seedlings. Bulletin of Environmental Contamination and Toxicology, 2019, 103, 636-641.	1.3	11
88	A critical review on bioremediation technologies for Cr(VI)-contaminated soils and wastewater. Critical Reviews in Environmental Science and Technology, 2019, 49, 1027-1078.	6.6	298
89	Activity of the soil enzymes and moss and lichen biomonitoring method used for the evaluation of soil and air pollution from tailing pond in NiÅ¾nÃ¡ SlanÃ¡ (Slovakia). Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2019, 54, 495-507.	0.9	14
90	Biochar induced Pb and Cu immobilization, phytoavailability attenuation in Chinese cabbage, and improved biochemical properties in naturally co-contaminated soil. Journal of Soils and Sediments, 2019, 19, 2381-2392.	1.5	39

#	Article	IF	Citations
91	Comparison of Pb stabilization in a contaminated calcareous soil by application of vermicompost and sheep manure and their biochars produced at two temperatures. Applied Geochemistry, 2019, 102, 121-128.	1.4	31
92	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
93	Phytolithâ€rich biochar: A potential Si fertilizer in desilicated soils. GCB Bioenergy, 2019, 11, 1264-1282.	2.5	90
94	Soil microbial response to metal contamination in a vegetated and urban brownfield. Journal of Environmental Management, 2019, 244, 313-319.	3.8	34
95	Remediation of heavy metal contaminated soils by biochar: Mechanisms, potential risks and applications in China. Environmental Pollution, 2019, 252, 846-855.	3.7	418
96	Revitalization of Mixed Chelatorâ€“Washed Soil by Adding of Inorganic and Organic Amendments. Water, Air, and Soil Pollution, 2019, 230, 1.	1.1	9
97	Simultaneous alleviation of Sb and Cd availability in contaminated soil and accumulation in Lolium multiflorum Lam. After amendment with Feâ€“Mn-Modified biochar. Journal of Cleaner Production, 2019, 231, 556-564.	4.6	98
98	Effect of biochars on the bioavailability of cadmium and di-(2-ethylhexyl) phthalate to Brassica chinensis L. in contaminated soils. Science of the Total Environment, 2019, 678, 43-52.	3.9	77
99	Preparation, modification and environmental application of biochar: A review. Journal of Cleaner Production, 2019, 227, 1002-1022.	4.6	1,216
100	Two years impacts of rapeseed residue and rice straw biochar on Pb and Cu immobilization and revegetation of naturally co-contaminated soil. Applied Geochemistry, 2019, 105, 97-104.	1.4	25
101	Surface-Modified Biochar with Polydentate Binding Sites for the Removal of Cadmium. International Journal of Molecular Sciences, 2019, 20, 1775.	1.8	23
102	Organic Manures for Cadmium Tolerance and Remediation. , 2019, , 19-67.		8
103	Copper environmental toxicology, recent advances, and future outlook: a review. Environmental Science and Pollution Research, 2019, 26, 18003-18016.	2.7	298
104	Preparation and Modification of Biochar Materials and their Application in Soil Remediation. Applied Sciences (Switzerland), 2019, 9, 1365.	1.3	169
105	Influence of rice straw biochar on growth, antioxidant capacity and copper uptake in ramie (Boehmeria nivea L.) grown as forage in aged copper-contaminated soil. Plant Physiology and Biochemistry, 2019, 138, 121-129.	2.8	114
106	Effect of Arbuscular Mycorrhizal Fungi, Selenium and Biochar on Photosynthetic Pigments and Antioxidant Enzyme Activity Under Arsenic Stress in Mung Bean (Vigna radiata). Frontiers in Physiology, 2019, 10, 193.	1.3	57
107	Effects of surface-modified biochars and activated carbon on the transformation of soil inorganic nitrogen and growth of maize under chromium stress. Chemosphere, 2019, 227, 124-132.	4.2	28
108	A geochemical analogy between the metal sources in Kuwait Bay and territorial sea water of Kuwait. Environmental Monitoring and Assessment, 2019, 191, 142.	1.3	16

#	Article	IF	Citations
109	Biochar-mediated sequestration of Pb and Cd leads to enhanced productivity in Mentha arvensis. Ecotoxicology and Environmental Safety, 2019, 172, 411-422.	2.9	54
110	Effect of Liming with Various Water Regimes on Both Immobilization of Cadmium and Improvement of Bacterial Communities in Contaminated Paddy: A Field Experiment. International Journal of Environmental Research and Public Health, 2019, 16, 498.	1.2	15
111	Electrochemical sensing of Pb(II) and Cd(II) in decorative material of wood panel using nano-cellulose paper-based electrode modified using Graphene/Multi-walled Carbon Nanotubes/Bismuth film. International Journal of Electrochemical Science, 2019, , 11253-11266.	0.5	9
112	Potential of Novel Biochars Produced from Invasive Aquatic Species Outside Food Chain in Removing Ammonium Nitrogen: Comparison with Conventional Biochars and Clinoptilolite. Sustainability, 2019, 11, 7136.	1.6	19
113	Research Progress of Biochar in Memediation of Contaminated Soil. IOP Conference Series: Earth and Environmental Science, 2019, 358, 022036.	0.2	1
114	Spatial and Vertical Variations and Heavy Metal Enrichments in Irrigated Soils of the Syr Darya River Watershed, Aral Sea Basin, Kazakhstan. International Journal of Environmental Research and Public Health, 2019, 16, 4398.	1.2	9
115	Cadmium and lead immobilization in a calcareous contaminated soil using the cost-effective amendments. Arabian Journal of Geosciences, 2019, 12, 1.	0.6	5
116	Wheat straw biochar application increases ammonia volatilization from an urban compacted soil giving a short-term reduction in fertilizer nitrogen use efficiency. Journal of Soils and Sediments, 2019, 19, 1624-1631.	1.5	28
117	The impact of crop residue biochars on silicon and nutrient cycles in croplands. Science of the Total Environment, 2019, 659, 673-680.	3.9	94
118	Greenhouse gas emissions vary in response to different biochar amendments: an assessment based on two consecutive rice growth cycles. Environmental Science and Pollution Research, 2019, 26, 749-758.	2.7	21
119	Potential of Biochar for Managing Metal Contaminated Areas, in Synergy With Phytomanagement or Other Management Options. , 2019, , 91-111.		4
120	Biochar as an (Im)mobilizing Agent for the Potentially Toxic Elements in Contaminated Soils. , 2019, , 255-274.		13
121	The effect of biochars application on reducing the toxic effects of nickel and growth indices of spinach (Spinacia oleracea L.) in a calcareous soil. Environmental Science and Pollution Research, 2019, 26, 1751-1760.	2.7	30
122	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
123	Chemical fractions and bioavailability of nickel in a Ni-treated calcareous soil amended with plant residue biochars. Archives of Agronomy and Soil Science, 2020, 66, 730-742.	1.3	12
124	Effects of contrasting biochars on the leaching of inorganic nitrogen from soil. Journal of Soils and Sediments, 2020, 20, 3017-3026.	1.5	24
125	The mechanisms of biochar interactions with microorganisms in soil. Environmental Geochemistry and Health, 2020, 42, 2495-2518.	1.8	125
126	Chemical and biological immobilization mechanisms of potentially toxic elements in biochar-amended soils. Critical Reviews in Environmental Science and Technology, 2020, 50, 903-978.	6.6	157

#	Article	IF	Citations
127	Effect of Coapplication of Biochar and Nutrients on Microbiocenotic Composition, Dehydrogenase Activity Index and Chemical Properties of Sandy Soil. Waste and Biomass Valorization, 2020, 11, 3911-3923.	1.8	28
128	Residual effects of tobacco biochar along with different fixing agents on stabilization of trace elements in multi-metal contaminated soils. Journal of Environmental Sciences, 2020, 87, 299-309.	3.2	19
129	A critical review on remediation of bisphenol S (BPS) contaminated water: Efficacy and mechanisms. Critical Reviews in Environmental Science and Technology, 2020, 50, 476-522.	6.6	56
130	Characteristics and applications of biochar for remediating Cr(VI)-contaminated soils and wastewater. Environmental Geochemistry and Health, 2020, 42, 1543-1567.	1.8	55
131	Physicochemical features, metal availability and enzyme activity in heavy metal-polluted soil remediated by biochar and compost. Science of the Total Environment, 2020, 701, 134751.	3.9	249
132	Effects of inorganic and organic amendments on physiological parameters and antioxidant enzymes activities in Zea mays L. from a cadmium-contaminated calcareous soil. South African Journal of Botany, 2020, 128, 132-140.	1.2	24
133	Remediation of Cd-contaminated soils by GWC application, evaluated in terms of Cd immobilization, enzyme activities, and pakchoi cabbage uptake. Environmental Science and Pollution Research, 2020, 27, 9979-9986.	2.7	20
134	Synthesis, characterization and application of magnetic and acid modified biochars following alkaline pretreatment of rice and cotton straws. Science of the Total Environment, 2020, 714, 136532.	3.9	60
135	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
136	Ex situ evaluation of the effects of biochars on environmental and toxicological availabilities of metals and polycyclic aromatic hydrocarbons. Environmental Science and Pollution Research, 2020, 27, 1852-1869.	2.7	9
137	Particle size and rate of biochar affected the phytoavailability of Cd and Pb by mustard plants grown in contaminated soils. International Journal of Phytoremediation, 2020, 22, 567-577.	1.7	7
138	Impact of spent mushroom substrate on Cd immobilization and soil property. Environmental Science and Pollution Research, 2020, 27, 3007-3022.	2.7	27
139	Achieving the safe use of Cd- and As-contaminated agricultural land with an Fe-based biochar: A field study. Science of the Total Environment, 2020, 706, 135898.	3.9	54
140	Optimization of NPK fertilization combined with phytoremediation of cadmium contaminated soil by orthogonal experiment. Ecotoxicology and Environmental Safety, 2020, 189, 109997.	2.9	45
141	Biochar Impacts on Acidic Soil from Camellia Oleifera Plantation: A Short-Term Soil Incubation Study. Agronomy, 2020, 10, 1446.	1.3	3
142	Biochar Application Does Not Improve the Biochemical Properties of Ni Contaminated Soil. Bulletin of Environmental Contamination and Toxicology, 2020, 105, 633-638.	1.3	2
143	Effects of biochar and foliar application of selenium on the uptake and subcellular distribution of chromium in Ipomoea aquatica in chromium-polluted soils. Ecotoxicology and Environmental Safety, 2020, 206, 111184.	2.9	30
144	Investigation of biochars application on potassium forms and dynamics in a calcareous soil under different moisture conditions. Archives of Agronomy and Soil Science, 2020, , 1-15.	1.3	11

#	Article	IF	Citations
145	Effects of Polyacrylamide-Based Super Absorbent Polymer and Corn Straw Biochar on the Arid and Semi-Arid Salinized Soil. Agriculture (Switzerland), 2020, 10, 519.	1.4	20
146	Effects of biochar and biofertilizer on cadmium-contaminated cotton growth and the antioxidative defense system. Scientific Reports, 2020, 10, 20112.	1.6	42
147	Effect of Organic Residues and Their Derived Biochars on the Zinc and Copper Chemical Fractions and Some Chemical Properties of a Calcareous Soil. Communications in Soil Science and Plant Analysis, 2020, 51, 1725-1735.	0.6	8
148	Can biochar reclaim coal mine spoil?. Journal of Environmental Management, 2020, 272, 111097.	3.8	37
149	Remediation of Soil Polluted with Cd in a Postmining Area Using Thiourea-Modified Biochar. International Journal of Environmental Research and Public Health, 2020, 17, 7654.	1.2	20
150	Efficacy of Woodchip Biochar and Brown Coal Waste as Stable Sorbents for Abatement of Bioavailable Cadmium, Lead and Zinc in Soil. Water, Air, and Soil Pollution, 2020, 231, 1.	1.1	13
151	The Use of Biochar as a Soil Amendment to Reduce Potentially Toxic Metals (PTMs) Phytoavailability. , 0, , .		8
152	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
153	Evaluation of nickel stabilization in a calcareous soil amended with biochars using mathematical adsorption models. Communications in Soil Science and Plant Analysis, 2020, 51, 1213-1226.	0.6	1
154	Heavy metal concentration in soil and maize (Zea mays L.) in partially reclaimed refuse dumpsite â€˜borrow-pitâ€™ in Port Harcourt, Nigeria. Environmental Technology and Innovation, 2020, 18, 100745.	3.0	17
155	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
156	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
157	Effect of garden waste biochar on the bioavailability of heavy metals and growth of Brassica juncea (L.) in a multi-contaminated soil. Arabian Journal of Geosciences, 2020, 13, 1.	0.6	15
158	Microbial community composition, co-occurrence network pattern and nitrogen transformation genera response to biochar addition in cattle manure-maize straw composting. Science of the Total Environment, 2020, 721, 137759.	3.9	136
159	Animal carcass- and wood-derived biochars improved nutrient bioavailability, enzyme activity, and plant growth in metal-phthalic acid ester co-contaminated soils: A trial for reclamation and improvement of degraded soils. Journal of Environmental Management, 2020, 261, 110246.	3.8	86
160	The ratio of H/C is a useful parameter to predict adsorption of the herbicide metolachlor to biochars. Environmental Research, 2020, 184, 109324.	3.7	42
161	Structural analysis and heavy metal adsorption of N-doped biochar from hydrothermal carbonization of Camellia sinensis waste. Environmental Science and Pollution Research, 2020, 27, 18866-18874.	2.7	35
162	Effects of Biochar on Absorption of Iron, Sodium and Manganese in Peach Seedlings. IOP Conference Series: Earth and Environmental Science, 2020, 446, 032006.	0.2	0

#	Article	IF	Citations
163	The Role of Biochar and Soil Properties in Determining the Available Content of Al, Cu, Zn, Mn, and Cd in Soil. Agronomy, 2020, 10, 885.	1.3	12
164	Role of biochars in soil fertility management of fruit crops. , 2020, , 431-444.		1
165	Bioavailability and Speciation of Heavy Metals in Polluted Soil as Alleviated by Different Types of Biochars. Bulletin of Environmental Contamination and Toxicology, 2020, 104, 484-488.	1.3	9
166	Spectroscopic studies on the phosphorus adsorption in salt-affected soils with or without nano-biochar additions. Environmental Research, 2020, 184, 109277.	3.7	42
167	Influence of high-dose continuous applications of pyroligneous acids on soil health assessed based on pH, moisture content and three hydrolases. Environmental Science and Pollution Research, 2020, 27, 15426-15439.	2.7	8
168	Effect of Dry Olive Residueâ€“Based Biochar and Arbuscular Mycorrhizal Fungi Inoculation on the Nutrient Status and Trace Element Contents in Wheat Grown in the As-, Cd-, Pb-, and Zn-Contaminated Soils. Journal of Soil Science and Plant Nutrition, 2020, 20, 1067-1079.	1.7	16
169	Nickel Immobilization in a Contaminated Calcareous Soil with Application of Organic Amendments and Their Derived Biochars. Communications in Soil Science and Plant Analysis, 2020, 51, 503-514.	0.6	10
170	Effects of Biochar Application on Soil Organic Carbon Composition and Enzyme Activity in Paddy Soil under Water-Saving Irrigation. International Journal of Environmental Research and Public Health, 2020, 17, 333.	1.2	45
171	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
172	Effects of Cd-resistant bacteria and calcium carbonate + sepiolite on Cd availability in contaminated paddy soil and on Cd accumulation in brown rice grains. Ecotoxicology and Environmental Safety, 2020, 195, 110492.	2.9	12
173	Phytoremediation: A multidisciplinary approach to clean up heavy metal contaminated soil. Environmental Technology and Innovation, 2020, 18, 100774.	3.0	261
174	Struvite-supported biochar composite effectively lowers Cu bio-availability and the abundance of antibiotic-resistance genes in soil. Science of the Total Environment, 2020, 724, 138294.	3.9	27
175	The use of biochar for sustainable treatment of contaminated soils. , 2020, , 119-167.		5
176	Combined biochar and soda residues increases maize yields and decreases grain Cd/Pb in a highly Cd/Pb-polluted acid Udults soil. Agriculture, Ecosystems and Environment, 2021, 306, 107198.	2.5	28
177	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
178	Relative importance of soil properties and heavy metals/metalloids to modulate microbial community and activity at a smelting site. Journal of Soils and Sediments, 2021, 21, 1-12.	1.5	26
179	Comparison of plant Cd accumulation from a Cd-contaminated soil amended with biochar produced from various feedstocks. Environmental Science and Pollution Research, 2021, 28, 12699-12706.	2.7	7
180	Impacts of bamboo biochar on the phytoremediation potential of Salix psammophila grown in multi-metals contaminated soil. International Journal of Phytoremediation, 2021, 23, 387-399.	1.7	30

#	Article	IF	Citations
181	Sorption of diethyl phthalate and cadmium by pig carcass and green waste-derived biochars under single and binary systems. Environmental Research, 2021, 193, 110594.	3.7	17
182	Impacts of exogenous mineral silicon on cadmium migration and transformation in the soil-rice system and on soil health. Science of the Total Environment, 2021, 759, 143501.	3.9	49
183	Chemical stabilization of Cd-contaminated soil using fresh and aged wheat straw biochar. Environmental Science and Pollution Research, 2021, 28, 10155-10166.	2.7	20
184	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
185	Microbial mechanism of biochar addition on nitrogen leaching and retention in tea soils from different plantation ages. Science of the Total Environment, 2021, 757, 143817.	3.9	30
186	Prospective usage of magnesium potassium phosphate cement combined with Bougainvillea alba derived biochar to reduce Pb bioavailability in soil and its uptake by Spinacia oleracea L. Ecotoxicology and Environmental Safety, 2021, 208, 111723.	2.9	108
187	Nanoscale zerovalent iron, carbon nanotubes and biochar facilitated the phytoremediation of cadmium contaminated sediments by changing cadmium fractions, sediments properties and bacterial community structure. Ecotoxicology and Environmental Safety, 2021, 208, 111510.	2.9	45
188	Pyrolysis of waste biomass and plastics for production of biochar and its use for removal of heavy metals from aqueous solution. Bioresource Technology, 2021, 320, 124278.	4.8	105
189	Iron-modified biochar and water management regime-induced changes in plant growth, enzyme activities, and phytoavailability of arsenic, cadmium and lead in a paddy soil. Journal of Hazardous Materials, 2021, 407, 124344.	6.5	150
190	Enhancement of exchangeable Cd and Pb immobilization in contaminated soil using Mg/Al LDH-zeolite as an effective adsorbent. RSC Advances, 2021, 11, 17007-17019.	1.7	8
191	Effects of an additive (hydroxyapatiteâ€“bentoniteâ€“biochar) on Cd and Pb stabilization and microbial community composition in contaminated vegetable soil. RSC Advances, 2021, 11, 12200-12208.	1.7	7
192	Alteration of plant physiology by the application of biochar for remediation of organic pollutants. , 2021, , 475-492.		4
193	Effect of Heavy Metal Contamination on Soil Enzymes Activities. Journal of Geoscience and Environment Protection, 2021, 09, 135-154.	0.2	5
194	Effects of Peanut Shell Biochar on Soil Nutrients, Soil Enzyme Activity, and Rice Yield in Heavily Saline-Sodic Paddy Field. Journal of Soil Science and Plant Nutrition, 2021, 21, 655-664.	1.7	38
195	Biochar Production for Green Environment. , 2021, , 533-556.		0
196	Effect of bamboo biochar on reducing grain cadmium content in two contrasting wheat genotypes. Environmental Science and Pollution Research, 2021, 28, 17405-17416.	2.7	15
197	Phytoremediation of cadmium-contaminated soil by Bidens pilosa L.: impact of pine needle biochar amendment. Environmental Science and Pollution Research, 2021, 28, 58872-58884.	2.7	17
198	Cadmium, lead, and zinc immobilization in soil using rice husk biochar in the presence of citric acid. International Journal of Environmental Science and Technology, 2022, 19, 567-580.	1.8	12

#	Article	IF	Citations
199	Dynamics of soil organic carbon mineralization and enzyme activities after twoÂmonths and sixÂyears of biochar addition. Biomass Conversion and Biorefinery, 2023, 13, 1153-1162.	2.9	4
200	Biochar Promotes Nitrogen Transformation and Tomato Yield by Regulating Nitrogen-Related Microorganisms in Tomato Cultivation Soil. Agronomy, 2021, 11, 381.	1.3	9
201	Cadmium, lead, and zinc immobilization in soil by rice husk biochar in the presence of low molecular weight organic acids. Environmental Technology (United Kingdom), 2022, 43, 2516-2529.	1.2	13
202	Influence of biochar on trace element uptake, toxicity and detoxification in plants and associated health risks: A critical review. Critical Reviews in Environmental Science and Technology, 2022, 52, 2803-2843.	6.6	63
203	Fractionation of Heavy Metals in Multi-Contaminated Soil Treated with Biochar Using the Sequential Extraction Procedure. Biomolecules, 2021, 11, 448.	1.8	38
204	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
205	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
206	Response of maize to coniferous tree woods biochar and sheep manure application to contaminated mine soil. Biomass Conversion and Biorefinery, 0, , 1.	2.9	0
207	The Effect of Different Soil Amendments on Soil Properties and on the Morphological and Physiological Characteristics of Chinese Cabbage. Journal of Soil Science and Plant Nutrition, 2021, 21, 1500-1510.	1.7	9
208	Immobilization of Cd and Pb in a contaminated acidic soil amended with hydroxyapatite, bentonite, and biochar. Journal of Soils and Sediments, 2021, 21, 2262-2272.	1.5	17
209	Copper: uptake, toxicity and tolerance in plants and management of Cu-contaminated soil. BioMetals, 2021, 34, 737-759.	1.8	118
210	The rhizosphere of Salix viminalis plants after a phytostabilization process assisted by biochar, compost, and iron grit: chemical and (micro)-biological analyses. Environmental Science and Pollution Research, 2021, 28, 47447-47462.	2.7	7
211	Biochar from Pine Wood, Rice Husks and Iron-Eupatorium Shrubs for Remediation Applications: Surface Characterization and Experimental Tests for Trichloroethylene Removal. Materials, 2021, 14, 1776.	1.3	14
212	Long-term effects of phytoextraction by a poplar clone on the concentration, fractionation, and transportation of heavy metals in mine tailings. Environmental Science and Pollution Research, 2021, 28, 47528-47539.	2.7	12
213	Biochar-assisted bio-cementation of a sand using native bacteria. Bulletin of Engineering Geology and the Environment, 2021, 80, 4967-4984.	1.6	19
214	Effects of Co-Applications of Biochar and Solid Digestate on Enzyme Activities and Heavy Metals Bioavailability in Cd-Polluted Greenhouse Soil. Water, Air, and Soil Pollution, 2021, 232, 1.	1.1	4
215	Pristine and iron-engineered animal- and plant-derived biochars enhanced bacterial abundance and immobilized arsenic and lead in a contaminated soil. Science of the Total Environment, 2021, 763, 144218.	3.9	72
216	Efficacy of chitosan-coated textile waste biochar applied to Cd-polluted soil for reducing Cd mobility in soil and its distribution in moringa (Moringa oleifera L.). Journal of Environmental Management, 2021, 284, 112047.	3.8	127

#	Article	IF	Citations
217	Biochar as a tool for effective management of drought and heavy metal toxicity. Chemosphere, 2021, 271, 129458.	4.2	152
218	Application of enzymes as a diagnostic tool for soils as affected by municipal solid wastes. Journal of Environmental Management, 2021, 286, 112169.	3.8	13
219	Recent advances in biochar engineering for soil contaminated with complex chemical mixtures: Remediation strategies and future perspectives. Science of the Total Environment, 2021, 767, 144351.	3.9	72
220	Calcite in combination with olive pulp biochar reduces Ni mobility in soil and its distribution in chili plant. International Journal of Phytoremediation, 2022, 24, 166-176.	1.7	189
221	Impact of water deficit on the development and senescence of tomato roots grown under various soil textures of Shaanxi, China. BMC Plant Biology, 2021, 21, 241.	1.6	9
222	Adsorption characteristics of modified rice straw biochar for Zn and in-situ remediation of Zn contaminated soil. Environmental Technology and Innovation, 2021, 22, 101388.	3.0	13
223	Effect of Feâ€“Mnâ€“La-modified biochar composites on arsenic volatilization in flooded paddy soil. Environmental Science and Pollution Research, 2021, 28, 49889-49898.	2.7	9
224	Bone-derived biochar improved soil quality and reduced Cd and Zn phytoavailability in a multi-metal contaminated mining soil. Environmental Pollution, 2021, 277, 116800.	3.7	66
225	Effect of biochar amendment on mobility and plant uptake of Zn, Pb and Cd in contaminated soil. IOP Conference Series: Earth and Environmental Science, 2021, 779, 012082.	0.2	4
226	AÃ§aÃ-Biochar and Compost Affect the Phosphorus Sorption, Nutrient Availability, and Growth of Dioclea apurensis in Iron Mining Soil. Minerals (Basel, Switzerland), 2021, 11, 674.	0.8	2
227	Assessment of post-wildfire soil quality and its recovery in semi-arid upland rangelands in Central Iran through selecting the minimum data set and quantitative soil quality index. Catena, 2021, 201, 105202.	2.2	11
229	Arbuscular mycorrhizal fungi and pistachio husk biochar combination reduces Ni distribution in mungbean plant and improves plant antioxidants and soil enzymes. Physiologia Plantarum, 2021, 173, 418-429.	2.6	61
230	Effects of rice straw biochar and nitrogen fertilizer on ramie (Boehmeria nivea L.) morpho-physiological traits, copper uptake and post-harvest soil characteristics, grown in an aged-copper contaminated soil. Journal of Plant Nutrition, 2022, 45, 11-24.	0.9	21
231	Salinity-induced changes in cadmium availability affect soil microbial and biochemical functions: Mitigating role of biochar. Chemosphere, 2021, 274, 129924.	4.2	8
232	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
233	Lead immobilisation in mining contaminated soil using biochar and ash from sugarcane. Plant, Soil and Environment, 2021, 67, 474-481.	1.0	0
234	Bioaugmentation and bioaugmentationâ€“assisted phytoremediation of heavy metal contaminated soil by a synergistic effect of cyanobacteria inoculation, biochar, and purslane (Portulaca oleracea L.). Environmental Science and Pollution Research, 2022, 29, 6040-6059.	2.7	18
235	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

#	Article	IF	Citations
236	Optimization of integrated phytoremediation system (IPS) for enhanced lead removal and restoration of soil microbial activities. Chemosphere, 2021, 277, 130243.	4.2	21
237	Activation of biochar through exoenzymes prompted by earthworms for vermibiochar production: A viable resource recovery option for heavy metal contaminated soils and water. Chemosphere, 2021, 278, 130458.	4.2	35
238	Influence of activated biochar pellet fertilizer application on greenhouse gas emissions and carbon sequestration in rice (Oryza sativa L.) production. Environmental Pollution, 2021, 285, 117457.	3.7	20
239	Application of typical artificial carbon materials from biomass in environmental remediation and improvement: A review. Journal of Environmental Management, 2021, 296, 113340.	3.8	16
240	Novel agrotechnological intervention for soil amendment through areca nut husk biochar in conjunction with vetiver grass. Chemosphere, 2022, 287, 132443.	4.2	3
241	Effects of silicon on heavy metal uptake at the soil-plant interphase: A review. Ecotoxicology and Environmental Safety, 2021, 222, 112510.	2.9	122
242	(Im)mobilization of arsenic, chromium, and nickel in soils via biochar: A meta-analysis. Environmental Pollution, 2021, 286, 117199.	3.7	40
243	Sugarcane bagasse biochar modulates metal and salinity stresses on microbial functions and enzyme activities in saline co-contaminated soils. Applied Soil Ecology, 2021, 167, 104043.	2.1	23
244	Biochar affects the fate of phosphorus in soil and water: A critical review. Chemosphere, 2021, 283, 131176.	4.2	69
245	Biochar-based fertilizer enhanced Cd immobilization and soil quality in soil-rice system. Ecological Engineering, 2021, 171, 106396.	1.6	11
246	Impacts of bio-stimulants on pyrene degradation, prokaryotic community compositions, and functions. Environmental Pollution, 2021, 289, 117863.	3.7	18
247	Immobilization of cadmium and lead using phosphorus-rich animal-derived and iron-modified plant-derived biochars under dynamic redox conditions in a paddy soil. Environment International, 2021, 156, 106628.	4.8	77
248	Response of soil characteristics to biochar and Fe-Mn oxide-modified biochar application in phthalate-contaminated fluvo-aquic soils. Ecotoxicology and Environmental Safety, 2021, 225, 112755.	2.9	7
249	Pig carcass-derived biochar caused contradictory effects on arsenic mobilization in a contaminated paddy soil under fluctuating controlled redox conditions. Journal of Hazardous Materials, 2022, 421, 126647.	6.5	32
250	Effects of biochar on berseem clover (Trifolium alexandrinum, L.) growth and heavy metal (Cd, Cr, Cu,) Tj ETQq0 0 0 rgBT /Overlock 10 T	4.2	31
251	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
252	Mitigation of greenhouse gas emissions from a red acidic soil by using magnesium-modified wheat straw biochar. Environmental Research, 2022, 203, 111879.	3.7	20
253	Elucidating the redox-driven dynamic interactions between arsenic and iron-impregnated biochar in a paddy soil using geochemical and spectroscopic techniques. Journal of Hazardous Materials, 2022, 422, 126808.	6.5	57

#	Article	IF	Citations
254	Changes in soil pH and nutrient extractability after co-applying biochar and paper mill biosolids. Canadian Journal of Soil Science, 2022, 102, 27-38.	0.5	9
255	Effect of coapplication of poultry litter biochar and mineral fertilisers on soil quality and crop yield. Zemdirbyste, 2018, 105, 203-210.	0.3	9
256	Relationship between Enzyme Activity (Urease-Catalase) and Nutrient Element in Soil Use. Polish Journal of Environmental Studies, 2018, 27, 2107-2112.	0.6	47
257	Influence of Biochar on Soil Nutrient Transformations, Nutrient Leaching, and Crop Yield. Advances in Plants & Agriculture Research, 2016, 4, .	0.3	23
258	Biochar improves the morphological, physiological and biochemical properties of white willow seedlings in heavy metal-contaminated soil. Archives of Biological Sciences, 2019, 71, 281-291.	0.2	14
259	Ecological Intensification for Soil Management: Biochar â€“ A Natural Solution for Soil from Agricultural Residues. , 2021, , 403-455.		1
260	Pig manure digestateâ€derived biochar for soil management and crop cultivation in heavy metals contaminated soil. Soil Use and Management, 2022, 38, 1307-1321.	2.6	14
261	Biochar alleviates metal toxicity and improves microbial community functions in a soil co-contaminated with cadmium and lead. Biochar, 2021, 3, 485-498.	6.2	26
262	Synthesis Strategies, Mechanisms, and Potential Risks of Biomass-Based Adsorbents (BAs) for Heavy Metal Removal from Aqueous Environment: a Review. Water, Air, and Soil Pollution, 2021, 232, 1.	1.1	3
264	Chemical Characterization of Mine Sites. , 2017, , 17-32.		2
265	Improvement of methods of estimating the change in the ecological state of soils under the influence of external loads. Agricultural Science and Practice, 2018, 5, 57-66.	0.8	0
266	Cadmium Toxicity in Plants: Recent Progress on Morpho-physiological Effects and Remediation Strategies. Journal of Soil Science and Plant Nutrition, 2022, 22, 212-269.	1.7	62
267	Bioengineered biochar as smart candidate for resource recovery toward circular bio-economy: a review. Bioengineered, 2021, 12, 10269-10301.	1.4	37
268	Inâ€'situ immobilization remediation, soil aggregate distribution, and microbial community composition in weakly alkaline Cdâ€'contaminated soils: A field study. Environmental Pollution, 2022, 292, 118327.	3.7	18
269	Lead in Rice Grain. , 2020, , 93-131.		1
270	Effects of different loading rates and types of biochar on passivations of Cu and Zn via swine manure composting. Journal of Arid Land, 2020, 12, 1056-1070.	0.9	7
271	Combined amendment improves soil health and Brown rice quality in paddy soils moderately and highly Co-contaminated with Cd and As. Environmental Pollution, 2022, 295, 118590.	3.7	19
272	Diminishing Heavy Metal Hazards of Contaminated Soil via Biochar Supplementation. Sustainability, 2021, 13, 12742.	1.6	15

#	Article	IF	Citations
273	Interactive effects of biochar amendment and lead toxicity on soil microbial community. Journal of Hazardous Materials, 2022, 425, 127921.	6.5	23
274	Biochar combined with phosphate fertilizer application reduces soil cadmium availability and cadmium uptake of maize in Cd-contaminated soils. Environmental Science and Pollution Research, 2022, 29, 25925-25938.	2.7	7
275	Wood biochar as an amendment for enhanced growth of Phacelia tanacetifolia. AIP Conference Proceedings, 2021, , .	0.3	2
276	An overview on biochar production, its implications, and mechanisms of biochar-induced amelioration of soil and plant characteristics. Pedosphere, 2022, 32, 107-130.	2.1	67
277	Preparation of ball-milled phosphorus-loaded biochar and its highly effective remediation for Cd- and Pb-contaminated alkaline soil. Science of the Total Environment, 2022, 813, 152648.	3.9	56
278	Residual Silicon and Phosphorus Improved the Growth, Yield, Nutrient Uptake and Soil Enzyme Activities of Wheat. Silicon, 2022, 14, 8949-8964.	1.8	4
279	Determination and seasonal analysis of physicochemical characterization and metal(oid)s of landfill leachate in Bushehr port along the Persian Gulf. Toxin Reviews, 2023, 42, 161-175.	1.5	9
280	Biochar and microbes for sustainable soil quality management. , 2022, , 289-311.		5
281	Effect of Pyroligneous Acid on the Microbial Community Composition and Plant Growth-Promoting Bacteria (PGPB) in Soils. Soil Systems, 2022, 6, 10.	1.0	9
282	Role of agrochemical-based nanomaterials in plants: biotic and abiotic stress with germination improvement of seeds. Plant Growth Regulation, 2022, 97, 375-418.	1.8	55
283	Dynamic Responses of Soil Enzymes at Key Growth Stages in Rice after the in Situ Remediation of Paddy Soil Contaminated with Cadmium and Arsenic. SSRN Electronic Journal, 0, , .	0.4	0
284	Pengaruh Remediasi Biochar dan Bioslurry Tanah Tercemar Terhadap Kadar Timbal Terlarut dan Bioavailabilitasnya pada Sawi Hijau (Brassica rapa). Jurnal Ilmu Lingkungan, 2022, 20, 335-343.	0.0	0
285	Application of cotton straw biochar and compound Bacillus biofertilizer decrease the bioavailability of soil cd through impacting soil bacteria. BMC Microbiology, 2022, 22, 35.	1.3	15
286	The impact of pristine and modified rice straw biochar on the emission of greenhouse gases from a red acidic soil. Environmental Research, 2022, 208, 112676.	3.7	26
287	Biochar alters chemical and microbial properties of microplastic-contaminated soil. Environmental Research, 2022, 209, 112807.	3.7	43
288	Effect of biochar on the growth of Ricinus communis grown on copper smelter slag: A pot scale study. AIP Conference Proceedings, 2022, , .	0.3	0
289	Poultry Litter Biochar as a Gentle Soil Amendment in Multi-Contaminated Soil: Quality Evaluation on Nutrient Preservation and Contaminant Immobilization. Agronomy, 2022, 12, 405.	1.3	6
290	Soil microbial biomass, activities and diversity in Southern Italy areas chronically exposed to trace element input from industrial and agricultural activities. Applied Soil Ecology, 2022, 174, 104392.	2.1	8

#	Article	IF	Citations
291	Biochar, slag and ferrous manganese ore affect lead, cadmium and antioxidant enzymes in water		

#	Article	IF	Citations
310	Alleviation of cadmium stress in rice by inoculation of Bacillus cereus. PeerJ, 2022, 10, e13131.	0.9	12
311	Sulfur enhances cadmium bioaccumulation in Cichorium intybus by altering soil properties, heavy metal availability and microbial community in contaminated alkaline soil. Science of the Total Environment, 2022, 837, 155879.	3.9	17
312	Role of biocharâ€“mineral composite amendment on the immobilization of heavy metals for Brassica chinensis from naturally contaminated soil. Environmental Technology and Innovation, 2022, 28, 102622.	3.0	21
313	The efficiency of potato peel biochar for the adsorption and immobilization of heavy metals in contaminated soil. International Journal of Phytoremediation, 2023, 25, 263-273.	1.7	3
314	Biochar for carbon sequestration and environmental remediation in soil. , 2022, , 35-49.		0
315	Review on effect of biochar on soil strength: Towards exploring usage of biochar in geo-engineering infrastructure. Biomass Conversion and Biorefinery, 0, , .	2.9	15
316	Biochar can mitigate co-selection and control antibiotic resistant genes (ARGs) in compost and soil. Heliyon, 2022, 8, e09543.	1.4	11
317	Remediation of Cu and As contaminated water and soil utilizing biochar supported layered double hydroxide: Mechanisms and soil environment altering. Journal of Environmental Sciences, 2023, 126, 275-286.	3.2	19
318	Chemical speciation and release kinetics of Ni in a Ni-contaminated calcareous soil as affected by organic waste biochars and soil moisture regime. Environmental Geochemistry and Health, 2023, 45, 199-213.	1.8	3
319	Effect of physicochemical properties of biochar from different feedstock on remediation of heavy metal contaminated soil in mining area. Surfaces and Interfaces, 2022, 32, 102058.	1.5	14
320	Organic amendments minimize the migration of potentially toxic elements in soilâ€“plant system in degraded agricultural lands. Biomass Conversion and Biorefinery, 2024, 14, 6547-6565.	2.9	11
321	Current trends in production, morphology, and real-world environmental applications of biochar for the promotion of sustainability. Bioresource Technology, 2022, 359, 127467.	4.8	28
322	Effect of supplementing biochar obtained from different wastes on biochemical and yield response of French bean (Phaseolus vulgaris L.): An experimental study. Biocatalysis and Agricultural Biotechnology, 2022, 43, 102432.	1.5	2
323	Potential application of enhanced phytoremediation for heavy metals treatment in Nepal. Chemosphere, 2022, 306, 135581.	4.2	13
324	Mitigation of the Adverse Impact of Copper, Nickel, and Zinc on Soil Microorganisms and Enzymes by Mineral Sorbents. Materials, 2022, 15, 5198.	1.3	7
325	Comparative study of cadmium nitrate and lead nitrate [Cd(NO3)2 and Pb(NO3)2] stress in cyto-physiological parameters of Capsicum annuum L.. Horticulture Environment and Biotechnology, 2022, 63, 627-641.	0.7	7
326	Lead and Zinc Uptake and Toxicity in Maize and Their Management. Plants, 2022, 11, 1922.	1.6	25
327	Growth and metabolism of dark septate endophytes and their stimulatory effects on plant growth. Fungal Biology, 2022, 126, 674-686.	1.1	8

#	Article	IF	Citations
328	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
329	Effect of biochar amendment on metal mobility, phytotoxicity, soil enzymes, and metal-uptakes by wheat (Triticum aestivum) in contaminated soils. Chemosphere, 2022, 307, 135889.	4.2	29
330	Combined apatite, biochar, and organic fertilizer application for heavy metal co-contaminated soil remediation reduces heavy metal transport and alters soil microbial community structure. Science of the Total Environment, 2022, 851, 158033.	3.9	37
332	Coupled effects of CO2 and biochar amendment on the yield and quality of Pseudostellaria heterophylla. Industrial Crops and Products, 2022, 188, 115599.	2.5	3
333	Biochar application for greenhouse gas mitigation, contaminants immobilization and soil fertility enhancement: A state-of-the-art review. Science of the Total Environment, 2022, 853, 158562.	3.9	76
334	Remediation of Cadmium Pollution in Paddy Soil by Femg-Ldh@Bentonite Mixed with Compost and Environmental Effects. SSRN Electronic Journal, 0, , .	0.4	0
336	Biochar: A promising soil amendment to mitigate heavy metals toxicity in plants. Notulae Botanicae Horti Agrobotanici Cluj-Napoca, 2022, 50, 12778.	0.5	6
337	Combined Use of Spent Mushroom Substrate Biochar and PGPR Improves Growth, Yield, and Biochemical Response of Cauliflower (Brassica oleracea var. botrytis): A Preliminary Study on Greenhouse Cultivation. Horticulturae, 2022, 8, 830.	1.2	27
338	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
339	Arsenic adsorption by different Fe-enriched biochars conditioned with sulfuric acid. Environmental Science and Pollution Research, 2023, 30, 16398-16407.	2.7	9
340	Jack Bean Development in Multimetal Contaminated Soil Amended with Coffee Waste-Derived Biochars. Processes, 2022, 10, 2157.	1.3	2
341	Ferrate-Modified Biochar for Greenhouse Gas Mitigation: First-Principles Calculation and Paddy Field Trails. Agronomy, 2022, 12, 2661.	1.3	5
342	Iron-modified phosphorus- and silicon-based biochars exhibited various influences on arsenic, cadmium, and lead accumulation in rice and enzyme activities in a paddy soil. Journal of Hazardous Materials, 2023, 443, 130203.	6.5	45
343	Effects of water hyacinth biochar on lettuce growth in cadmium-contaminated soil. Frontiers in Soil Science, 0, 2, .	0.8	0
344	Cotton straw biochar and compound Bacillus biofertilizer reduce Cd stress on cotton root growth by regulating root exudates and antioxidant enzymes system. Frontiers in Plant Science, 0, 13, .	1.7	6
345	Electrochemical environmental pollutant detection enabled by waste tangerine peel-derived biochar. Diamond and Related Materials, 2023, 131, 109617.	1.8	7
346	Enhancing the effect of biochar ageing on reducing cadmium accumulation in Medicago sativa L. Science of the Total Environment, 2023, 862, 160690.	3.9	3
347	Chemical Fractionations of Lead and Zinc in the Contaminated Soil Amended with the Blended Biochar/Apatite. Molecules, 2022, 27, 8044.	1.7	3

#	Article	IF	Citations
348	Valorization of banana peel as biochar and assessment of its effect in biochar-assisted phytoremediation of cadmium-contaminated soil by using the Taguchi method. Biomass Conversion and Biorefinery, 2023, 13, 9451-9463.	2.9	3
349	Properties of Recycled Nanomaterials and Their Effect on Biological Activity and Yield of Canola in Degraded Soils. Agriculture (Switzerland), 2022, 12, 2096.	1.4	4
350	Potential implications of biochar and compost on the stoichiometry-based assessments of soil enzyme activity in heavy metal-polluted soils. , 2022, 1, .		17
351	Application of biochar and compost improved soil properties and enhanced plant growth in a Pbâ€“Zn mine tailings soil. Environmental Science and Pollution Research, 2023, 30, 32337-32347.	2.7	8
352	Minimizing salinity-induced Pb toxicity to microbial N cycling processes in saline Pb-polluted soils amended with biochar. Pedobiologia, 2023, 96, 150861.	0.5	1
354	Recent advances in biochar amendments for immobilization of heavy metals in an agricultural ecosystem: A systematic review. Environmental Pollution, 2023, 319, 120937.	3.7	19
355	Chromium Contamination and Health Risk Assessment of Soil and Agricultural Products in a Rural Area in Southern China. Toxics, 2023, 11, 27.	1.6	5
356	Phosphate Removal Mechanisms in Aqueous Solutions by Three Different Fe-Modified Biochars. International Journal of Environmental Research and Public Health, 2023, 20, 326.	1.2	6
357	Evaluating heavy metal pollution risks and enzyme activity in soils with intensive hazelnut cultivation under humid ecological conditions. Environmental Monitoring and Assessment, 2023, 195, .	1.3	1
358	Effects of magnesium-modified biochar on soil organic carbon mineralization in citrus orchard. Frontiers in Microbiology, 0, 14, .	1.5	2
359	Properties of Nano-Amendments and Their Effect on Some Soil Properties and Root-Knot Nematode and Yield Attributes of Tomato Plant. Agriculture (Switzerland), 2023, 13, 366.	1.4	2
360	Chitosan a versatile adsorbent in environmental remediation in the era of circular economy-a mini review. Sustainable Chemistry and Pharmacy, 2023, 32, 101004.	1.6	8
361	Environmental Factors Influence the Effects of Biochar on the Bioavailability of Cd and Pb in Soil Under Flooding Condition. Water, Air, and Soil Pollution, 2023, 234, .	1.1	5
362	Biochar-compost as a new option for soil improvement: Application in various problem soils. Science of the Total Environment, 2023, 870, 162024.	3.9	42
363	Agricultural Strategies to Reduce Cadmium Accumulation in Crops for Food Safety. Agriculture (Switzerland), 2023, 13, 471.	1.4	8
364	Changes in the Availability and Distribution of Microelement Copper in Cadmium Contaminated Soil and its Accumulation in Rice (Oryza sativa L.) After Biochar Application. Bulletin of Environmental Contamination and Toxicology, 2023, 110, .	1.3	0
365	Complementing compost with biochar for agriculture, soil remediation and climate mitigation. Advances in Agronomy, 2023, , 1-90.	2.4	3
366	Insight into the Speciation of Heavy Metals in the Contaminated Soil Incubated with Corn Cob-Derived Biochar and Apatite. Molecules, 2023, 28, 2225.	1.7	1

#	Article	IF	Citations
367	Toxic effects of cadmium on the physiological and biochemical attributes of plants, and phytoremediation strategies: A review. Environmental Pollution, 2023, 325, 121433.	3.7	32
368	Biochar Feedstocks, Synthesis and Interaction with Soil Microorganisms. Sustainable Agriculture Reviews, 2023, , 355-373.	0.6	0
392	Potential Application of Biochar for Efficient Restoration of Crude Oil-Contaminated Sites. , 2023, , 331-350.		1
399	Biocharâ€™s effect on soil properties. , 2024, , 45-80.		0
409	Impact of Agricultural Wastes on Environment and Possible Management Strategies. , 2024, , 79-108.		0