

# CITATION REPORT

List of articles citing

A review of biocharsspotential role in the remediation, revegetation and restoration of contaminated soils

DOI: 10.1016/j.envpol.2011.07.023

Environmental Pollution, 2011, 159, 3269-82.

**Source:** <https://exaly.com/paper-pdf/51165282/citation-report.pdf>

**Version:** 2024-04-09

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
1157	Effects of Biotic and Abiotic Amendments on Phytoremediation Efficiency Applied to Metal-Polluted Soils. <b>2012</b> , 308-317		
1156	Effect of biochar amendment on sorption and leaching of nitrate, ammonium, and phosphate in a sandy soil. <b>2012</b> , 89, 1467-71		553
1155	Lead retention by broiler litter biochars in small arms range soil: impact of pyrolysis temperature. <b>2012</b> , 60, 5035-44		104
1154	Synthesis, characterization, and environmental implications of graphene-coated biochar. <b>2012</b> , 435-436, 567-72		158
1153	Polar and aliphatic domains regulate sorption of phthalic acid esters (PAEs) to biochars. <b>2012</b> , 118, 120-7		138
1152	Kinetic and adsorptive characterization of biochar in metal ions removal. <b>2012</b> , 197, 295-305		430
1151	Effects of soil dilution and amendments (mussel shell, cow bone, and biochar) on Pb availability and phytotoxicity in military shooting range soil. <b>2012</b> , 79, 225-231		231
1150	Influence of activated carbon and biochar on phytotoxicity of air-dried sewage sludges to <i>Lepidium sativum</i> . <b>2012</b> , 80, 321-6		33
1149	The secrets of El Dorado viewed through a microbial perspective. <b>2012</b> , 3, 239		13
1148	THE REDUCTION OF WHEAT Cd UPTAKE IN CONTAMINATED SOIL VIA BIOCHAR AMENDMENT: A TWO-YEAR FIELD EXPERIMENT. <b>2012</b> , 7,		56
1147	In situ remediation of contaminated sediments using carbonaceous materials. <b>2012</b> , 31, 693-704		84
1146	PAH-sequestration capacity of granular and powder activated carbon amendments in soil, and their effects on earthworms and plants. <b>2012</b> , 88, 699-705		47
1145	Biochar influences the microbial community structure during manure composting with agricultural wastes. <b>2012</b> , 416, 476-81		152
1144	Bioavailability assessment of hexachlorobenzene in soil as affected by wheat straw biochar. <b>2012</b> , 217-218, 391-7		81
1143	Interactions of simazine, metsulfuron-methyl, and tetracycline with biochars and soil as a function of molecular structure. <b>2013</b> , 13, 1600-1610		26
1142	Enhanced wheat yield by biochar addition under different mineral fertilization levels. <b>2013</b> , 33, 475-484		197
1141	Effect of biochars, activated carbon and multiwalled carbon nanotubes on phytotoxicity of sediment contaminated by inorganic and organic pollutants. <b>2013</b> , 60, 50-59		63

1140	Beneficial effects of biochar application to contaminated soils on the bioavailability of Cd, Pb and Zn and the biomass production of rapeseed ( <i>Brassica napus</i> L.). <b>2013</b> , 57, 196-204	278
1139	Bioleaching of heavy metal from woody biochar using <i>Acidithiobacillus ferrooxidans</i> and activation for adsorption. <b>2013</b> , 146, 803-806	32
1138	Biochar-mediated [ <sup>14</sup> C]atrazine mineralization in atrazine-adapted soils from Belgium and Brazil. <b>2013</b> , 61, 512-6	28
1137	Linking restoration outcomes with mechanism: the role of site preparation, fertilisation and revegetation timing relative to soil density and water content. <b>2013</b> , 214, 987-998	15
1136	Sorption of As(V) by Aluminum-Modified Crop Straw-Derived Biochars. <b>2013</b> , 224, 1	34
1135	Using biochar for remediation of soils contaminated with heavy metals and organic pollutants. <b>2013</b> , 20, 8472-83	503
1134	As(V) retention on soils and forest by-products and other waste materials. <b>2013</b> , 20, 6574-83	33
1133	Dual role of biochars as adsorbents for aluminum: the effects of oxygen-containing organic components and the scattering of silicate particles. <b>2013</b> , 47, 8759-68	72
1132	Comparison of rice husk- and dairy manure-derived biochars for simultaneously removing heavy metals from aqueous solutions: role of mineral components in biochars. <b>2013</b> , 92, 955-61	313
1131	Characteristics of biochar and its application in remediation of contaminated soil. <b>2013</b> , 116, 653-9	353
1130	Biochar mitigates negative effects of salt additions on two herbaceous plant species. <b>2013</b> , 129, 62-8	145
1129	Artifact weathering, anthropogenic microparticles and lead contamination in urban soils at former demolition sites, Detroit, Michigan. <i>Environmental Pollution</i> , <b>2013</b> , 179, 1-12	9:3 39
1128	Evaluation of biochars and activated carbons for in situ remediation of sediments impacted with organics, mercury, and methylmercury. <b>2013</b> , 47, 13721-9	117
1127	Engineered biochar reclaiming phosphate from aqueous solutions: mechanisms and potential application as a slow-release fertilizer. <b>2013</b> , 47, 8700-8	432
1126	Characteristics and nutrient values of biochars produced from giant reed at different temperatures. <b>2013</b> , 130, 463-71	240
1125	Reducing the bioavailability of PCBs in soil to plant by biochars assessed with triolein-embedded cellulose acetate membrane technique. <i>Environmental Pollution</i> , <b>2013</b> , 174, 250-6	9:3 28
1124	Assessment of biochar and iron filing amendments for the remediation of a metal, arsenic and phenanthrene co-contaminated spoil. <i>Environmental Pollution</i> , <b>2013</b> , 178, 361-6	9:3 59
1123	Removal of Cu, Zn, and Cd from aqueous solutions by the dairy manure-derived biochar. <b>2013</b> , 20, 358-68	388

1122	Biochars immobilize soil cadmium, but do not improve growth of emergent wetland species <i>Juncus subsecundus</i> in cadmium-contaminated soil. <b>2013</b> , 13, 140-151		79
1121	Carbonaceous soil amendments to biofortify crop plants with zinc. <b>2013</b> , 465, 308-13		58
1120	Sorption of antibiotic sulfamethoxazole varies with biochars produced at different temperatures. <i>Environmental Pollution</i> , <b>2013</b> , 181, 60-7	9.3	262
1119	Mobility, bioavailability and pH-dependent leaching of cadmium, zinc and lead in a contaminated soil amended with biochar. <b>2013</b> , 92, 1450-7		480
1118	Sorption of heavy metals on chitosan-modified biochars and its biological effects. <b>2013</b> , 231, 512-518		241
1117	Characterization of sewage sludge-derived biochars from different feedstocks and pyrolysis temperatures. <b>2013</b> , 102, 137-143		218
1116	In situ application of activated carbon and biochar to PCB-contaminated soil and the effects of mixing regime. <i>Environmental Pollution</i> , <b>2013</b> , 182, 201-8	9.3	62
1115	Characterization and influence of biochars on nitrous oxide emission from agricultural soil. <i>Environmental Pollution</i> , <b>2013</b> , 174, 289-96	9.3	125
1114	Biochar soil amendment as a solution to prevent Cd-tainted rice from China: Results from a cross-site field experiment. <b>2013</b> , 58, 378-383		169
1113	Role of sorbent surface functionalities and microporosity in 2,2',4,4'-tetrabromodiphenyl ether sorption onto biochars. <b>2013</b> , 25, 1368-78		15
1112	Investigation of different amendments for dump reclamation in Northern Vietnam. <b>2013</b> , 132, 41-53		7
1111	In situ and ex situ spectroscopic monitoring of biochar's surface functional groups. <b>2013</b> , 102, 53-59		93
1110	Overview of in situ and ex situ remediation technologies for PCB-contaminated soils and sediments and obstacles for full-scale application. <b>2013</b> , 445-446, 237-60		238
1109	Application of crop straw derived biochars to Cu(II) contaminated Ultisol: evaluating role of alkali and organic functional groups in Cu(II) immobilization. <b>2013</b> , 133, 537-45		81
1108	Biological responses to activated carbon amendments in sediment remediation. <b>2013</b> , 47, 7595-607		73
1107	Preliminary laboratory production and characterization of biochars from lignocellulosic municipal waste. <b>2013</b> , 99, 71-78		61
1106	Immobilization of chlorobenzenes in soil using wheat straw biochar. <b>2013</b> , 61, 4210-7		33
1105	Characteristics of Straw Biochar and its Influence on the Forms of Arsenic in Heavy Metal Polluted Soil. <b>2013</b> , 409-410, 133-138		6

1104	Adsorption Characteristics of Phenol in Aqueous Solution by Pinus massoniana Biochar. <b>2013</b> , 295-298, 1154-1160	4
1103	Long-Term Carbon Sequestration and Environmental Immobilization of Biochar: A Review. <b>2013</b> , 790, 475-478	1
1102	Observations of limited secondary effects to benthic invertebrates and macrophytes with activated carbon amendment in river sediments. <b>2013</b> , 32, 1504-15	19
1101	Biochar-Fungi Interactions in Soils. <b>2013</b> , 77-107	23
1100	Mineral constituents profile of biochar derived from diversified waste biomasses: implications for agricultural applications. <b>2013</b> , 42, 545-52	74
1099	The Application of Biochar in the EU: Challenges and Opportunities. <b>2013</b> , 3, 462-473	40
1098	Biochar Effect on Maize Yield and Soil Characteristics in Five Conservation Farming Sites in Zambia. <b>2013</b> , 3, 256-274	167
1097	Effective Remediation of Contaminated Soils by Eco-Compatible Physical, Biological, and Chemical Practices. <b>2013</b> , 267-296	4
1096	Influence of Pyrolysis Temperature on Cadmium and Zinc Sorption Capacity of Sugar Cane Straw-Derived Biochar. <b>2013</b> , 8,	84
1095	Adsorptive Removal of Heavy Metal from Acidic Wastewater with Biochar Produced from Anaerobically Digested Residues: Kinetics and Surface Complexation Modeling. <b>2014</b> , 9,	8
1094	Biochar Reduces Zinc and Cadmium but not Copper and Lead Leaching on a Former Sewage Field. <b>2014</b> , 43, 1886-93	13
1093	Biochar amendment affects leaching potential of copper and nutrient release behavior in contaminated sandy soils. <b>2014</b> , 43, 1894-902	32
1092	Tratamento de Resíduos de Serviços de Saúde pelo processo de pirólise. <b>2014</b> , 19, 187-194	1
1091	Can Biochar Come to the Rescue of Coastal Barren Species? A Controlled Study Reports on the Impact of Biochar Amendment on Their Survival. <b>2014</b> , 9,	4
1090	Opportunities and constraints for biochar technology in Australian agriculture: looking beyond carbon sequestration. <b>2014</b> , 52, 739	38
1089	Biochar can be used to capture essential nutrients from dairy wastewater and improve soil physico-chemical properties. <b>2014</b> , 5, 953-962	61
1088	Biochar-based bioenergy and its environmental impact in Northwestern Ontario Canada: A review. <b>2014</b> , 25, 737-748	18
1087	Immobilization of Ni and Cd in Soil by Biochar Derived From Unfertilized Dates. <b>2014</b> , 225, 1	34

1086	Biochars in soils: new insights and emerging research needs. <b>2014</b> , 65, 22-27	39
1085	Biochar-supported zerovalent iron reclaims silver from aqueous solution to form antimicrobial nanocomposite. <b>2014</b> , 117, 801-5	57
1084	Adsorption of organic chemicals on graphene coated biochars and its environmental implications. <b>2014</b> , 3,	9
1083	Physical and chemical characterization of biochars derived from different agricultural residues. <b>2014</b> , 11, 6613-6621	385
1082	Contrasting Effects of Sorghum Biochars and Sorghum Residues on Soil Chemical Changes of Coastal Plains Ultisols With Winter Wheat. <b>2014</b> , 179, 383-392	1
1081	Anti-elastase, anti-tyrosinase and matrix metalloproteinase-1 inhibitory activity of earthworm extracts as potential new anti-aging agent. <b>2014</b> , 4, S348-52	36
1080	Use of phytoremediation and biochar to remediate heavy metal polluted soils: a review. <b>2014</b> , 5, 65-75	304
1079	Biochar: an effective amendment for remediating contaminated soil. <b>2014</b> , 228, 83-99	7
1078	Metal removal with two biochars made from municipal organic waste: adsorptive characterization and surface complexation modeling. <b>2014</b> , 96, 1463-1475	4
1077	Biochar application to hardrock mine tailings: Soil quality, microbial activity, and toxic element sorption. <b>2014</b> , 43, 35-48	73
1076	Improvement to Maize Growth Caused by Biochars Derived From Six Feedstocks Prepared at Three Different Temperatures. <b>2014</b> , 13, 533-540	35
1075	Assessing biochar's ability to reduce bioavailability of aminocyclopyrachlor in soils. <i>Environmental Pollution</i> , <b>2014</b> , 189, 92-7	9.3 16
1074	Effect of soil organic amendments on the behavior of bentazone and tricyclazole. <b>2014</b> , 466-467, 906-13	47
1073	Biochar- and phosphate-induced immobilization of heavy metals in contaminated soil and water: implication on simultaneous remediation of contaminated soil and groundwater. <b>2014</b> , 21, 4665-74	75
1072	Carbon dioxide capture using biochar produced from sugarcane bagasse and hickory wood. <b>2014</b> , 249, 174-179	200
1071	Amendment Application in a Multicontaminated Mine Soil: Effects on Trace Element Mobility. <b>2014</b> , 225, 1	14
1070	Loading of VO <sub>2</sub> <sup>+</sup> and Cu <sup>2+</sup> to partially oxidized charcoal fines rejected from Brazilian metallurgical industry. <b>2014</b> , 14, 353-359	9
1069	Trace element concentrations in leachates and mustard plant tissue ( <i>Sinapis alba</i> L.) after biochar application to temperate soils. <b>2014</b> , 481, 498-508	48

1068	Response of plant and soil microbes to biochar amendment of an arsenic-contaminated soil. <b>2014</b> , 191, 133-141		62
1067	Application of biochar to soil reduces cancer risk via rice consumption: a case study in Miaoqian village, Longyan, China. <b>2014</b> , 68, 154-61		129
1066	Characterization and environmental applications of clayBiochar composites. <b>2014</b> , 242, 136-143		232
1065	Environmental benefits and risks of biochar application to soil. <b>2014</b> , 191, 1-4		24
1064	Characterization of biochar-derived dissolved organic matter using UV-visible absorption and excitation-emission fluorescence spectroscopies. <b>2014</b> , 103, 197-204		117
1063	Suitability of biochars (pyro- and hydrochars) for metal immobilization on former sewage-field soils. <b>2014</b> , 65, 139-148		60
1062	Short-term effects of biochar on soil heavy metal mobility are controlled by intra-particle diffusion and soil pH increase. <b>2014</b> , 65, 149-161		193
1061	Aqueous Mercury Sorption by Biochar from Malt Spent Rootlets. <b>2014</b> , 225, 1		38
1060	Interactions of aluminum with biochars and oxidized biochars: implications for the biochar aging process. <b>2014</b> , 62, 373-80		191
1059	Biochar from Miscanthus: a potential silicon fertilizer. <b>2014</b> , 374, 871-882		70
1058	Elements uptake by metal accumulator species grown on mine tailings amended with three types of biochar. <b>2014</b> , 468-469, 598-608		191
1057	Increased agronomic and environmental value provided by biochars with varied physiochemical properties derived from swine manure blended with rice straw. <b>2014</b> , 62, 10623-31		27
1056	Modern approaches to remediation of heavy metal polluted soils: A review. <b>2014</b> , 47, 707-722		66
1055	Ca and Fe modified biochars as adsorbents of arsenic and chromium in aqueous solutions. <b>2014</b> , 146, 444-450		138
1054	Impact of agronomic practices on arsenic accumulation and speciation in rice grain. <i>Environmental Pollution</i> , <b>2014</b> , 194, 217-223	9.3	75
1053	Interaction of organic and inorganic fractions of biochar with Pb(II) ion: further elucidation of mechanisms for Pb(II) removal by biochar. <b>2014</b> , 4, 44930-44937		79
1052	Effects of biochar and activated carbon amendment on maize growth and the uptake and measured availability of polycyclic aromatic hydrocarbons (PAHs) and potentially toxic elements (PTEs). <i>Environmental Pollution</i> , <b>2014</b> , 193, 79-87	9.3	84
1051	Polyethylenimine modified biochar adsorbent for hexavalent chromium removal from the aqueous solution. <b>2014</b> , 169, 403-408		250

1050	Redox properties of plant biomass-derived black carbon (biochar). <b>2014</b> , 48, 5601-11	534
1049	Arsenic and chromium removal from water using biochars derived from rice husk, organic solid wastes and sewage sludge. <b>2014</b> , 133, 309-14	267
1048	Effect of bamboo and rice straw biochars on the bioavailability of Cd, Cu, Pb and Zn to <i>Sedum plumbizincicola</i> . <b>2014</b> , 191, 124-132	247
1047	The biochar dilemma. <b>2014</b> , 52, 217	135
1046	Phytoremediating a copper mine soil with <i>Brassica juncea</i> L., compost and biochar. <b>2014</b> , 21, 11293-304	51
1045	Mechanisms of water interaction with pore systems of hydrochar and pyrochar from poplar forestry waste. <b>2014</b> , 62, 4917-23	33
1044	A three-year experiment confirms continuous immobilization of cadmium and lead in contaminated paddy field with biochar amendment. <b>2014</b> , 272, 121-8	390
1043	Effects of biochar amendment on root traits and contaminant availability of maize plants in a copper and arsenic impacted soil. <b>2014</b> , 379, 351-360	74
1042	Biochars derived from various crop straws: characterization and Cd(II) removal potential. <b>2014</b> , 106, 226-31	146
1041	Removal of Radioactive Cesium ( <sup>134</sup> Cs plus <sup>137</sup> Cs) from Low-Level Contaminated Water by Charcoal and Broiler Litter Biochar. <b>2014</b> , 20, 1183-1189	11
1040	Reviews of Environmental Contamination and Toxicology Volume 228. <b>2014</b> ,	2
1039	Competing uses for China's straw: the economic and carbon abatement potential of biochar. <b>2015</b> , 7, 1272-1282	84
1038	Considerations in Biochar Characterization. <b>2015</b> , 87-100	3
1037	Agricultural and Environmental Applications of Biochar: Advances and Barriers. <b>2015</b> , 495-504	4
1036	Interaction Mechanisms between Biochar and Organic Pollutants. <b>2015</b> , 225-257	2
1035	Biochar Application for Abandoned Mine Land Reclamation. <b>2015</b> , 325-339	9
1034	Regional Considerations for Targeted Use of Biochar in Agriculture and Remediation in Australia. <b>2015</b> , 445-474	1
1033	Application of Biochar for Soil Remediation. <b>2015</b> , 295-324	16



1032	Biochar amendment to lead-contaminated soil: Effects on fluorescein diacetate hydrolytic activity and phytotoxicity to rice. <b>2015</b> , 34, 1962-8	9
1031	Biochar-induced formation of ZnB-phases in former sewage field soils studied by P K-edge XANES spectroscopy. <b>2015</b> , 178, 582-585	17
1030	Biochar addition enhanced growth of <i>Dactylis glomerata</i> L. and immobilized Zn and Cd but mobilized Cu and Pb on a former sewage field soil. <b>2015</b> , 66, 505-515	25
1029	Leaching of soil-derived major and trace elements in an arable topsoil after the addition of biochar. <b>2015</b> , 66, 823-834	18
1028	Metal leaching in mine tailings: short-term impact of biochar and wood ash amendments. <b>2015</b> , 44, 275-85	10
1027	Rice Husk Ash to Stabilize Heavy Metals Contained in Municipal Solid Waste Incineration Fly Ash: First Results by Applying New Pre-treatment Technology. <b>2015</b> , 8, 6868-6879	17
1026	BIOCHAR: PYROGENIC CARBON FOR AGRICULTURAL USE - A CRITICAL REVIEW. <b>2015</b> , 39, 321-344	105
1025	Effects of Nanoscale Carbon Black Modified by HNO <sub>3</sub> on Immobilization and Phytoavailability of Ni in Contaminated Soil. <b>2015</b> , 2015, 1-7	10
1024	Optimization of ultrasonic-assisted extraction for determination of polycyclic aromatic hydrocarbons in biochar-based fertilizer by gas chromatography-mass spectrometry. <b>2015</b> , 407, 6149-57	13
1023	The potential role of biochar in the removal of organic and microbial contaminants from potable and reuse water: A review. <b>2015</b> , 134, 232-40	319
1022	Perennial Grass Production Opportunities on Marginal Mediterranean Land. <b>2015</b> , 8, 1523-1537	42
1021	Effects of Biochars and Compost Mixtures and Inorganic Additives on Immobilisation of Heavy Metals in Contaminated Soils. <b>2015</b> , 226, 1	50
1020	Biochar and forest restoration: a review and meta-analysis of tree growth responses. <b>2015</b> , 46, 931-946	112
1019	Impact of various amendments on immobilization and phytoavailability of nickel and zinc in a contaminated floodplain soil. <b>2015</b> , 12, 2765-2776	58
1018	Effect of pyrochar and hydrochar amendments on the mineralization of the herbicide isoproturon in an agricultural soil. <b>2015</b> , 134, 528-35	20
1017	Influence of biochar application methods on the phytostabilization of a hydrophobic soil contaminated with lead and acid tar. <b>2015</b> , 150, 226-234	28
1016	Ecotoxicological characterization of biochars: role of feedstock and pyrolysis temperature. <b>2015</b> , 512-513, 552-561	69
1015	Comparison of Heavy Metal Adsorption by Peat Moss and Peat Moss-Derived Biochar Produced Under Different Carbonization Conditions. <b>2015</b> , 226, 1	57

1014	The effects of biochar and compost amendments on copper immobilization and soil microorganisms in a temperate vineyard. <b>2015</b> , 201, 58-69	101
1013	Application of organic amendments to restore degraded soil: effects on soil microbial properties. <b>2015</b> , 187, 109	39
1012	Multifaceted application of crop residue biochar as a tool for sustainable agriculture: An ecological perspective. <b>2015</b> , 77, 324-347	85
1011	Effect of biochar on heavy metal immobilization and uptake by lettuce ( <i>Lactuca sativa</i> L.) in agricultural soil. <b>2015</b> , 74, 1249-1259	153
1010	Plant growth and metal uptake by a non-hyperaccumulating species ( <i>Lolium perenne</i> ) and a Cd-Zn hyperaccumulator ( <i>Noccaea caerulescens</i> ) in contaminated soils amended with biochar. <b>2015</b> , 395, 57-73	79
1009	Application of biochar for the removal of pollutants from aqueous solutions. <b>2015</b> , 125, 70-85	989
1008	Quantification of chemical states, dissociation constants and contents of oxygen-containing groups on the surface of biochars produced at different temperatures. <b>2015</b> , 49, 309-17	205
1007	Impact of biochar and root-induced changes on metal dynamics in the rhizosphere of <i>Agrostis capillaris</i> and <i>Lupinus albus</i> . <b>2015</b> , 139, 644-51	74
1006	Immobilization of soil copper using organic and inorganic amendments. <b>2015</b> , 178, 112-117	26
1005	Reverse engineering of biochar. <b>2015</b> , 183, 163-74	25
1004	Enhanced rice production but greatly reduced carbon emission following biochar amendment in a metal-polluted rice paddy. <b>2015</b> , 22, 18977-86	27
1003	Sorption of lead by Salisbury biochar produced from British broadleaf hardwood. <b>2015</b> , 193, 553-6	82
1002	Cascading microalgae biorefinery: Fast pyrolysis of <i>Dunaliella tertiolecta</i> lipid extracted-residue. <b>2015</b> , 11, 184-193	58
1001	Endogenous minerals have influences on surface electrochemistry and ion exchange properties of biochar. <b>2015</b> , 136, 133-9	46
1000	Slash-and-char: An ancient agricultural technique holds new promise for management of soils contaminated by Cd, Pb and Zn. <i>Environmental Pollution</i> , <b>2015</b> , 205, 333-9	9.3 30
999	Immobilization of Cd(II) in acid soil amended with different biochars with a long term of incubation. <b>2015</b> , 22, 12597-604	57
998	A preliminary assessment of the potential of using an acacia--biochar system for spent mine site rehabilitation. <b>2015</b> , 22, 2138-44	38
997	Positioning activated carbon amendment technologies in a novel framework for sediment management. <b>2015</b> , 11, 221-34	27

996	Biochar Mitigates Salinity Stress in Potato. <b>2015</b> , 201, 368-378	120
995	DNA extraction methodology for biochar-amended sand and clay. <b>2015</b> , 51, 733-738	14
994	Influence of biochar on sorption, leaching and dissipation of bisphenol A and 17 $\beta$ -ethynylestradiol in soil. <b>2015</b> , 17, 1722-30	15
993	Algal Biorefineries. <b>2015</b> ,	14
992	Assessment of amendments for the immobilization of Cu in soils containing EDDS leachates. <b>2015</b> , 22, 16525-34	11
991	Biomass and chemical amendments for enhanced phytoremediation of mixed contaminated soils. <b>2015</b> , 85, 265-274	63
990	Biochar efficiency in pesticides sorption as a function of production variables--a review. <b>2015</b> , 22, 13824-41	63
989	Ecological restoration of an acidic Cd contaminated soil using bamboo biochar application. <b>2015</b> , 84, 67-76	129
988	Application of Biochars for Soil Constraints: Challenges and Solutions. <b>2015</b> , 25, 631-638	54
987	Chemical fractionation of Cu, Ni, Pb and Zn in a mine soil amended with compost and biochar and vegetated with <i>Brassica juncea</i> L.. <b>2015</b> , 158, 74-81	53
986	Elaboration, characteristics and advantages of biochars for the management of contaminated soils with a specific overview on <i>Miscanthus</i> biochars. <b>2015</b> , 162, 275-89	60
985	Production of Biochar for Soil Application: A Comparative Study of Three Kiln Models. <b>2015</b> , 25, 696-702	26
984	g-C <sub>3</sub> N <sub>4</sub> Modified biochar as an adsorptive and photocatalytic material for decontamination of aqueous organic pollutants. <b>2015</b> , 358, 231-239	94
983	Effects of a manganese oxide-modified biochar composite on adsorption of arsenic in red soil. <b>2015</b> , 163, 155-62	84
982	Ecological Effects of Biochar on the Structure and Function of Stream Benthic Communities. <b>2015</b> , 49, 14649-54	9
981	Investigating the mechanisms of biochar's removal of lead from solution. <b>2015</b> , 177, 308-17	255
980	Trace element biogeochemistry in the soil-water-plant system of a temperate agricultural soil amended with different biochars. <b>2015</b> , 22, 4513-26	21
979	Combination of biochar amendment and mycoremediation for polycyclic aromatic hydrocarbons immobilization and biodegradation in creosote-contaminated soil. <b>2015</b> , 285, 259-66	99

978	Biochar production and applications in sub-Saharan Africa: opportunities, constraints, risks and uncertainties. <b>2015</b> , 150, 250-261	121
977	Physical and chemical characterization of waste wood derived biochars. <b>2015</b> , 36, 256-68	220
976	Sorption and desorption of Cr(VI) ions from water by biochars in different environmental conditions. <b>2015</b> , 22, 5985-94	97
975	The impact of biochars on sorption and biodegradation of polycyclic aromatic hydrocarbons in soils--a review. <b>2015</b> , 22, 3314-41	83
974	Characteristics of slow pyrolysis biochars produced from rhodes grass and fronds of edible date palm. <b>2015</b> , 111, 183-190	57
973	Aromaticity and degree of aromatic condensation of char. <b>2015</b> , 78, 135-143	150
972	Toxicity of biochars after polycyclic aromatic hydrocarbons removal by thermal treatment. <b>2015</b> , 75, 79-85	73
971	Biotechnologies and Biomimetics for Civil Engineering. <b>2015</b> ,	13
970	Biotechnological Aspects of Soil Decontamination. <b>2015</b> , 373-410	1
969	Characteristics and Applications of Biochar for Environmental Remediation: A Review. <b>2015</b> , 45, 939-969	276
968	Production and Utilization of Biochar From Organic Wastes for Pollutant Control on Contaminated Sites. <b>2016</b> , 91-116	7
967	Biochar-carrying hydrocarbon decomposers promote degradation during the early stage of bioremediation. <b>2016</b> , 13, 5739-5752	30
966	Morphology of Modified Biochar and Its Potential for Phenol Removal from Aqueous Solutions. <b>2016</b> , 4,	35
965	An Innovative Agro-Forestry Supply Chain for Residual Biomass: Physicochemical Characterisation of Biochar from Olive and Hazelnut Pellets. <b>2016</b> , 9, 526	33
964	The Potential Benefits and Limitations of Corn Cob and Sewage Sludge Biochars in an Infertile Oxisol. <b>2016</b> , 8, 131	24
963	Responses of bacterial community and functional marker genes of nitrogen cycling to biochar, compost and combined amendments in soil. <b>2016</b> , 100, 8583-91	110
962	Effect of activated carbon or biochars on toxicity of different soils contaminated by mixture of native polycyclic aromatic hydrocarbons and heavy metals. <b>2016</b> , 35, 1321-8	17
961	Recent developments in biochar as an effective tool for agricultural soil management: a review. <b>2016</b> , 96, 4840-4849	86

960	Changes on the Phytoavailability of Nutrients in a Mine Soil Reclaimed with Compost and Biochar. <b>2016</b> , 227, 1	26
959	Co-transport of Pesticide Acetamiprid and Silica Nanoparticles in Biochar-Amended Sand Porous Media. <b>2016</b> , 45, 1749-1759	10
958	BIOCHARS IN SOILS: TOWARDS THE REQUIRED LEVEL OF SCIENTIFIC UNDERSTANDING. <b>2016</b> , 25, 192-207	37
957	Microbial Ecology Analysis of Biochar-Augmented Soils. <b>2016</b> , 1-40	5
956	A Critical Analysis of Meso- and Macrofauna Effects Following Biochar Supplementation. <b>2016</b> , 268-292	10
955	The Review on Adsorption and Removing Ammonia Nitrogen with Biochar on its Mechanism. <b>2016</b> , 67, 07006	9
954	Effects of the physicochemical properties of biochar and soil on moisture sorption. <b>2016</b> , 8, 064702	2
953	Biochar as a soil amendment. <b>2016</b> , 67, 151-157	10
952	Salisbury biochar did not affect the mobility or speciation of lead in kaolin in a short-term laboratory study. <b>2016</b> , 316, 214-20	27
951	Biosorbents for the removal of synthetic organics and emerging pollutants: Opportunities and challenges for developing countries. <b>2016</b> , 19, 84-89	68
950	Addition of organic material to sulfuric soil can reduce leaching of protons, iron and aluminium. <b>2016</b> , 271, 63-70	8
949	Contributions of a compost-biochar mixture to the metal sorption capacity of a mine tailing. <b>2016</b> , 23, 2595-602	14
948	Mycoextraction by <i>Clitocybe maxima</i> combined with metal immobilization by biochar and activated carbon in an aged soil. <b>2016</b> , 562, 732-739	45
947	Is current biochar research addressing global soil constraints for sustainable agriculture?. <b>2016</b> , 226, 25-32	66
946	The Challenges and Solutions for Cadmium-contaminated Rice in China: A Critical Review. <b>2016</b> , 92-93, 515-32	339
945	Nanomaterials-enabled water and wastewater treatment. <b>2016</b> , 3-4, 22-39	217
944	Effect of biochar on the fate and transport of manure-borne progesterone in soil. <b>2016</b> , 97, 231-241	3
943	Carbon fractionation in a mine soil amended with compost and biochar and vegetated with <i>Brassica juncea</i> L. <b>2016</b> , 169, 137-143	21

942	Impacts of rapeseed dregs on Cd availability in contaminated acid soil and Cd translocation and accumulation in rice plants. <b>2016</b> , 23, 20853-20861		17
941	In situ remediation and phytotoxicity assessment of lead-contaminated soil by biochar-supported nHAP. <b>2016</b> , 182, 247-251		25
940	Effects of biochars on the availability of heavy metals to ryegrass in an alkaline contaminated soil. <i>Environmental Pollution</i> , <b>2016</b> , 218, 513-522	9.3	96
939	Removal of phosphate from aqueous solution by SiO <sub>2</sub> Biochar nanocomposites prepared by pyrolysis of vermiculite treated algal biomass. <b>2016</b> , 6, 83534-83546		42
938	Effect of pyrolysis temperature on potential toxicity of biochar if applied to the environment. <i>Environmental Pollution</i> , <b>2016</b> , 218, 1-7	9.3	101
937	Reuse of Stabilized Contaminated Soils with Heavy Metals as Greening Soils: Leaching, Physicochemical, and Phytotoxicity Characterization. <b>2016</b> ,		
936	Biochar improves agro-environmental aspects of pig slurry compost as a substrate for crops with energy and remediation uses. <b>2016</b> , 94, 97-106		23
935	Copper accumulation in vineyard soils: Rhizosphere processes and agronomic practices to limit its toxicity. <b>2016</b> , 162, 293-307		90
934	Improving salt leaching in a simulated saline soil column by three biochars derived from rice straw ( <i>Oryza sativa</i> L.), sunflower straw ( <i>Helianthus annuus</i> ), and cow manure. <b>2016</b> , 71, 467-475		39
933	Influence of biochar and seaweed extract applications on growth, yield and mineral composition of wheat ( <i>Triticum aestivum</i> L.) under sandy soil conditions. <b>2016</b> , 61, 257-265		17
932	Effects of biochars derived from different pyrolysis temperatures on growth of <i>Vallisneria spiralis</i> and dissipation of polycyclic aromatic hydrocarbons in sediments. <b>2016</b> , 93, 199-206		21
931	Sensitive responders among bacterial and fungal microbiome to pyrogenic organic matter (biochar) addition differed greatly between rhizosphere and bulk soils. <b>2016</b> , 6, 36101		40
930	Effect of low-temperature biochar derived from pig manure and poultry litter on mobile and organic matter-bound forms of Cu, Cd, Pb and Zn in sandy soil. <b>2016</b> , 32, 357-367		31
929	Effects of biochars derived from chicken manure and rape straw on speciation and phytoavailability of Cd to maize in artificially contaminated loess soil. <b>2016</b> , 184, 569-574		51
928	Biochar Amendment for Reducing Leachability of Nitro Explosives and Metals from Contaminated Soils and Mine Tailings. <b>2016</b> , 45, 993-1002		6
927	Characterization, Quantification and Compound-specific Isotopic Analysis of Pyrogenic Carbon Using Benzene Polycarboxylic Acids (BPCA). <b>2016</b> ,		13
926	Sorption of Lincomycin by Manure-Derived Biochars from Water. <b>2016</b> , 45, 519-27		25
925	Gasified Grass and Wood Biochars Facilitate Plant Establishment in Acid Mine Soils. <b>2016</b> , 45, 1013-20		12

924	Pyrolysis temperature and steam activation effects on sorption of phosphate on pine sawdust biochars in aqueous solutions. <b>2016</b> , 28, 42-50	62
923	Adsorption of phthalic acid esters (PAEs) on chemically aged biochars. <b>2016</b> , 5,	1
922	A preliminary assessment on the use of biochar as a soil additive for reducing soil-to-plant uptake of cesium isotopes in radioactively contaminated environments. <b>2016</b> , 307, 2015-2020	10
921	Soil Health, Crop Productivity, Microbial Transport, and Mine Spoil Response to Biochars. <b>2016</b> , 9, 454-464	43
920	Remediation of lead contaminated soil by biochar-supported nano-hydroxyapatite. <b>2016</b> , 132, 224-30	80
919	Characterization of the bio-oil and bio-char produced by fixed bed pyrolysis of the brown alga <i>Saccharina japonica</i> . <b>2016</b> , 33, 2691-2698	30
918	Biochar applications and modern techniques for characterization. <b>2016</b> , 18, 1457-1473	57
917	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. <b>2016</b> , 566-567, 816-825	46
916	Application of a biosorbent to soil: a potential method for controlling water pollution by pesticides. <b>2016</b> , 23, 9192-203	36
915	The concentration and changes in freely dissolved polycyclic aromatic hydrocarbons in biochar-amended soil. <i>Environmental Pollution</i> , <b>2016</b> , 214, 748-755	9.3 22
914	Enhanced Immobilization of Cr(VI) in Soils by the Amendment of Rice Straw Char. <b>2016</b> , 25, 505-518	7
913	Effects of biochar and alkaline amendments on cadmium immobilization, selected nutrient and cadmium concentrations of lettuce ( <i>Lactuca sativa</i> ) in two contrasting soils. <b>2016</b> , 5, 397	56
912	Production and utilization of biochar: A review. <b>2016</b> , 40, 1-15	611
911	Effect of biochar on migration and biodegradation of 4-n-nonylphenol (NP) during river-based groundwater recharge with reclaimed water. <b>2016</b> , 57, 29316-29327	7
910	Effect of aging process on adsorption of diethyl phthalate in soils amended with bamboo biochar. <b>2016</b> , 142, 28-34	84
909	Amendment of biochar reduces the release of toxic elements under dynamic redox conditions in a contaminated floodplain soil. <b>2016</b> , 142, 41-7	149
908	Restoration of carbon and microbial activity in salt-induced soil by application of peanut shell biochar during short-term incubation study. <b>2016</b> , 148, 86-98	82
907	Engineering the Rhizosphere. <b>2016</b> , 21, 266-278	153

906	Sewage sludge biochar: Nutrient composition and its effect on the leaching of soil nutrients. <b>2016</b> , 267, 17-23	146
905	The effects of feedstock pre-treatment and pyrolysis temperature on the production of biochar from the green seaweed <i>Ulva</i> . <b>2016</b> , 169, 253-60	20
904	Potential for leaching of heavy metals in open-burning bottom ash and soil from a non-engineered solid waste landfill. <b>2016</b> , 147, 144-54	21
903	Sorption of Atrazine, 17 $\beta$ -Estradiol, and Phenanthrene on Wheat Straw and Peanut Shell Biochars. <b>2016</b> , 227, 1	24
902	Spectroscopic characterization of dissolved organic matter derived from different biochars and their polycyclic aromatic hydrocarbons (PAHs) binding affinity. <b>2016</b> , 152, 399-406	78
901	Efficacy of carbonaceous nanocomposites for sorbing ionizable antibiotic sulfamethazine from aqueous solution. <b>2016</b> , 95, 103-12	260
900	Varying effect of biochar on Cd, Pb and As mobility in a multi-metal contaminated paddy soil. <b>2016</b> , 152, 196-206	138
899	Effect of Polycyclic Aromatic Hydrocarbon Source Materials and Soil Components on Partitioning and Dermal Uptake. <b>2016</b> , 50, 3444-52	21
898	Effects of manure- and lignocellulose-derived biochars on adsorption and desorption of zinc by acidic types of soil with different properties. <b>2016</b> , 67, 40-50	33
897	Leaching and fractionation of heavy metals in mining soils amended with biochar. <b>2016</b> , 164, 25-33	91
896	Quantification of <i>Aspergillus fumigatus</i> and enteric bacteria in European compost and biochar. <b>2016</b> , 24, 20-29	11
895	Cd immobilization in a contaminated rice paddy by inorganic stabilizers of calcium hydroxide and silicon slag and by organic stabilizer of biochar. <b>2016</b> , 23, 10028-36	76
894	Optimising the recovery and re-use of phosphorus from wastewater effluent for sustainable fertiliser development. <b>2016</b> , 94, 155-165	94
893	Acidic sandy soil improvement with biochar - A microcosm study. <b>2016</b> , 563-564, 855-65	48
892	Biochar and compost amendments enhance copper immobilisation and support plant growth in contaminated soils. <b>2016</b> , 171, 101-112	66
891	The Interfacial Behavior between Biochar and Soil Minerals and Its Effect on Biochar Stability. <b>2016</b> , 50, 2264-71	192
890	Microbial growth and community structure in acid mine soils after addition of different amendments for soil reclamation. <b>2016</b> , 272, 64-72	60
889	Preparation of high adsorption performance and stable biochar granules by FeCl <sub>3</sub> -catalyzed fast pyrolysis. <b>2016</b> , 6, 12226-12234	12



888	Assessing biochar ecotoxicology for soil amendment by root phytotoxicity bioassays. <b>2016</b> , 188, 166	36
887	Effects of biochar on the transformation and earthworm bioaccumulation of organic pollutants in soil. <b>2016</b> , 145, 431-7	42
886	Impact of pigeon pea biochar on cadmium mobility in soil and transfer rate to leafy vegetable spinach. <b>2016</b> , 188, 31	36
885	Availability and transfer to grain of As, Cd, Cu, Ni, Pb and Zn in a barley agri-system: Impact of biochar, organic and mineral fertilizers. <b>2016</b> , 219, 171-178	72
884	Ecological restoration in contaminated soils of Kokdzhon phosphate mining area (Zhambyl region, Kazakhstan). <b>2016</b> , 86, 1-4	9
883	Long-term impact of biochar on the immobilisation of nickel (II) and zinc (II) and the revegetation of a contaminated site. <b>2016</b> , 542, 771-6	97
882	Agronomic and remedial benefits and risks of applying biochar to soil: Current knowledge and future research directions. <b>2016</b> , 87, 1-12	219
881	The changes in biochar properties and sorption capacities after being cultured with wheat for 3 months. <b>2016</b> , 144, 2257-63	41
880	A review of biochar as a low-cost adsorbent for aqueous heavy metal removal. <b>2016</b> , 46, 406-433	703
879	Mechanisms of biochar-mediated alleviation of toxicity of trace elements in plants: a critical review. <b>2016</b> , 23, 2230-48	279
878	Biochar-surface oxygenation with hydrogen peroxide. <b>2016</b> , 165, 17-21	119
877	Life cycle assessment of sunflower cultivation on abandoned mine land for biodiesel production. <b>2016</b> , 112, 182-195	25
876	A synthesis of parameters related to the binding of neutral organic compounds to charcoal. <b>2016</b> , 144, 65-74	48
875	Sorption and degradation of carbaryl in soils amended with biochars: influence of biochar type and content. <b>2016</b> , 23, 2724-34	34
874	Can biochar be used as a seed coating to improve native plant germination and growth in arid conditions?. <b>2016</b> , 125, 8-15	13
873	Variation in sorption of propiconazole with biochars: The effect of temperature, mineral, molecular structure, and nano-porosity. <b>2016</b> , 142, 56-63	41
872	Assessing the influence of technosol and biochar amendments combined with Brassica juncea L. on the fractionation of Cu, Ni, Pb and Zn in a polluted mine soil. <b>2016</b> , 16, 339-348	22
871	Effect of biochar on reclaimed tidal land soil properties and maize (Zea mays L.) response. <b>2016</b> , 142, 153-9	102

870	Sorption and desorption of cadmium and zinc in two tropical soils amended with sugarcane-straw-derived biochar. <b>2016</b> , 16, 226-234	52
869	Biochar amendment to soil changes dissolved organic matter content and composition. <b>2016</b> , 142, 100-5	154
868	Root development of non-accumulating and hyperaccumulating plants in metal-contaminated soils amended with biochar. <b>2016</b> , 142, 48-55	58
867	Automatic flow-through dynamic extraction: A fast tool to evaluate char-based remediation of multi-element contaminated mine soils. <b>2016</b> , 148, 686-93	7
866	Bioenergy-derived waste biochar for reducing mobility, bioavailability, and phytotoxicity of chromium in anthropized tannery soil. <b>2017</b> , 17, 731-740	32
865	Use of biochar-compost to improve properties and productivity of the degraded coastal soil in the Yellow River Delta, China. <b>2017</b> , 17, 780-789	121
864	Exposure of agricultural crops to nanoparticle CeO in biochar-amended soil. <b>2017</b> , 110, 147-157	43
863	The Effect of Low-Temperature Conversion of Plant Materials on the Chemical Composition and Ecotoxicity of Biochars. <b>2017</b> , 8, 599-609	12
862	Immobilization of metals in contaminated soils using natural polymer-based stabilizers. <i>Environmental Pollution</i> , <b>2017</b> , 222, 348-355	9.3 16
861	Wood-derived-biochar combined with compost or iron grit for in situ stabilization of Cd, Pb, and Zn in a contaminated soil. <b>2017</b> , 24, 7468-7481	36
860	Decrease in the genotoxicity of metal-contaminated soils with biochar amendments. <b>2017</b> , 24, 27634-27641	13
859	Characterization of lignocellulosic compositions' degradation during chicken manure composting with added biochar by phospholipid fatty acid (PLFA) and correlation analysis. <b>2017</b> , 586, 1003-1011	40
858	Translating analytical pyrolysis fingerprints to Thermal Stability Indices (TSI) to improve biochar characterization by pyrolysis-GC-MS. <b>2017</b> , 98, 306-320	15
857	Structural characteristics of biochar-graphene nanosheet composites and their adsorption performance for phthalic acid esters. <b>2017</b> , 319, 9-20	123
856	Amendments and substrates to develop anthroposols for northern mine reclamation. <b>2017</b> , 97, 266-277	11
855	Mobility and phytoavailability of As and Pb in a contaminated soil using pine sawdust biochar under systematic change of redox conditions. <b>2017</b> , 178, 110-118	185
854	Corn cob biochar increases soil culturable bacterial abundance without enhancing their capacities in utilizing carbon sources in Biolog Eco-plates. <b>2017</b> , 16, 713-724	27
853	Characterizing Biochar as Alternative Sorbent for Oil Spill Remediation. <b>2017</b> , 7, 43912	34

852	THE DIFFERENT FACES OF BIOCHAR: CONTAMINATION RISK VERSUS REMEDIATION TOOL. <b>2017</b> , 25, 86-104	45
851	Mitigating Negative Microbial Effects of p-Nitrophenol, Phenol, Copper and Cadmium in a Sandy Loam Soil Using Biochar. <b>2017</b> , 228, 1	2
850	MULTIPHASE REACTORS FOR BIOMASS PROCESSING AND THERMOCHEMICAL CONVERSIONS. <b>2017</b> , 331-376	1
849	Pyrolysis for exploitation of biomasses selected for soil phytoremediation: Characterization of gaseous and solid products. <b>2017</b> , 61, 288-299	25
848	Porous materials for the sorption of emerging organic pollutants from aqueous systems: The case for conjugated microporous polymers. <b>2017</b> , 16, 223-232	12
847	Hydrochar production from watermelon peel by hydrothermal carbonization. <b>2017</b> , 241, 236-243	102
846	Effects of acidic and neutral biochars on properties and cadmium retention of soils. <b>2017</b> , 180, 564-573	44
845	A Direct Observation of the Fine Aromatic Clusters and Molecular Structures of Biochars. <b>2017</b> , 51, 5473-5482	109
844	Changes in heavy metal mobility and availability from contaminated wetland soil remediated with combined biochar-compost. <b>2017</b> , 181, 281-288	221
843	Streptomyces pactum assisted phytoremediation in Zn/Pb smelter contaminated soil of Feng County and its impact on enzymatic activities. <b>2017</b> , 7, 46087	24
842	Sorption properties optimization of agricultural wastes-derived biochars using response surface methodology. <b>2017</b> , 109, 509-519	38
841	Study on adsorption characteristics of biochar on heavy metals in soil. <b>2017</b> , 34, 1867-1873	33
840	Remediation of Soils Polluted with Inorganic Contaminants: Role of Organic Amendments. <b>2017</b> , 313-337	3
839	Effect of Lupinus albus L. root activities on As and Cu mobility after addition of iron-based soil amendments. <b>2017</b> , 182, 373-381	16
838	Sugar-derived disordered carbon nano-sheets as high-performance electrodes in sodium-ion batteries. <b>2017</b> , 41, 4286-4290	11
837	Enhanced biodegradation of PAHs in historically contaminated soil by M. gilvum inoculated biochar. <b>2017</b> , 182, 316-324	60
836	Biochar-based water treatment systems as a potential low-cost and sustainable technology for clean water provision. <b>2017</b> , 197, 732-749	182
835	Effect of addition of sewage sludge and coal sludge on bioavailability of selected metals in the waste from the zinc and lead industry. <b>2017</b> , 156, 588-596	15

834	Effects and mechanisms of biochar-microbe interactions in soil improvement and pollution remediation: A review. <i>Environmental Pollution</i> , <b>2017</b> , 227, 98-115	9.3	381
833	Phosphate reclaim from simulated and real eutrophic water by magnetic biochar derived from water hyacinth. <b>2017</b> , 187, 212-219		63
832	Potential Environmental Benefits from Blending Biosolids with Other Organic Amendments before Application to Land. <b>2017</b> , 46, 481-489		19
831	Potential of Biochar to Mitigate Allelopathic Effects in Tropical Island Invasive Plants: Evidence From Seed Germination Trials. <b>2017</b> , 10, 194008291769726		12
830	Effect of Biochar Amendment and Ageing on Adsorption and Degradation of Two Herbicides. <b>2017</b> , 228, 216		37
829	Indispensable role of biochar-inherent mineral constituents in its environmental applications: A review. <b>2017</b> , 241, 887-899		170
828	Influence of surface chemistry of carbon materials on their interactions with inorganic nitrogen contaminants in soil and water. <b>2017</b> , 184, 532-547		31
827	Pyrogenic carbon and its role in contaminant immobilization in soils. <b>2017</b> , 47, 795-876		59
826	Effect of biochar on the presence of nutrients and ryegrass growth in the soil from an abandoned indigenous coking site: The potential role of biochar in the revegetation of contaminated site. <b>2017</b> , 601-602, 469-477		22
825	Role of biochar on composting of organic wastes and remediation of contaminated soils-a review. <b>2017</b> , 24, 16560-16577		131
824	Degradation of dimethyl disulphide in soil with or without biochar amendment. <b>2017</b> , 73, 1830-1836		12
823	Characteristics and mechanisms of nickel adsorption on biochars produced from wheat straw pellets and rice husk. <b>2017</b> , 24, 12809-12819		101
822	Effect of chloride and nitrate salts on Hg(II) sorption by raw and pyrolyzed malt spent rootlets. <b>2017</b> , 92, 1912-1918		11
821	Fates of Chemical Elements in Biomass during Its Pyrolysis. <b>2017</b> , 117, 6367-6398		255
820	Restoring ecological properties of acidic soils contaminated with elemental sulfur. <b>2017</b> , 587-588, 449-456		7
819	A study of torrefied cardboard characterization and applications: Composition, oxidation kinetics and methane adsorption. <b>2017</b> , 593-594, 406-417		19
818	The Response of Bats (Mammalia: Chiroptera) to Habitat Modification in a Neotropical Savannah. <b>2017</b> , 10, 194008291769726		12
817	Bioavailability and toxicity of pyrene in soils upon biochar and compost addition. <b>2017</b> , 595, 132-140		30

816	Characterization of KOH modified biochars from different pyrolysis temperatures and enhanced adsorption of antibiotics. <b>2017</b> , 7, 14640-14648	57
815	Biological response of a sandy soil treated with biochar derived from a halophyte ( <i>Salicornia bigelovii</i> ). <b>2017</b> , 114, 9-15	27
814	Biochar potential evaluation of palm oil wastes through slow pyrolysis: Thermochemical characterization and pyrolytic kinetic studies. <b>2017</b> , 236, 155-163	114
813	Biochar reduced nitrate leaching and improved soil moisture content without yield improvements in a four-year field study. <b>2017</b> , 237, 80-94	167
812	Effect of biochar amendments on As and Pb mobility and phytoavailability in contaminated mine technosols phytoremediated by <i>Salix</i> . <b>2017</b> , 182, 149-156	72
811	Impact of multiwall carbon nanotubes on the accumulation and distribution of carbamazepine in collard greens ( <i>Brassica oleracea</i> ). <b>2017</b> , 4, 149-159	33
810	Characteristics of different types of biochar and effects on the toxicity of heavy metals to germinating sorghum seeds. <b>2017</b> , 182, 157-165	35
809	Long-term Cu stabilization and biomass yields of Giant reed and poplar after adding a biochar, alone or with iron grit, into a contaminated soil from a wood preservation site. <b>2017</b> , 579, 620-627	21
808	Potential role of biochars in decreasing soil acidification - A critical review. <b>2017</b> , 581-582, 601-611	209
807	Glory and misery of biochar. <b>2017</b> , 19, 311-317	130
806	Comparison of the effects of compost versus compost and biochar on the recovery of a mine soil by improving the nutrient content. <b>2017</b> , 183, 46-57	23
805	Total petroleum hydrocarbon degradation in contaminated soil as affected by plants growth and biochar. <b>2017</b> , 76, 1	15
804	Modulation of trace element bioavailability for two earthworm species after biochar amendment into a contaminated technosol. <b>2017</b> , 26, 1378-1391	2
803	Biosorption of cadmium(II), lead(II) and cobalt(II) from aqueous solution by biochar from cones of larch ( <i>Larix decidua</i> Mill. subsp. <i>decidua</i> ) and spruce ( <i>Picea abies</i> L. H. Karst). <b>2017</b> , 76, 1	10
802	Enhanced adsorption of hexavalent chromium by a biochar derived from ramie biomass ( <i>Boehmeria nivea</i> (L.) Gaud.) modified with Eyclodextrin/poly(L-glutamic acid). <b>2017</b> , 24, 23528-23537	21
801	Mechanisms for Increasing the pH Buffering Capacity of an Acidic Ultisol by Crop Residue-Derived Biochars. <b>2017</b> , 65, 8111-8119	61
800	Use of <i>Piptatherum miliaceum</i> for the phytomanagement of biochar amended Technosols derived from pyritic tailings to enhance soil aggregation and reduce metal(loid) mobility. <b>2017</b> , 307, 159-171	23
799	Reduced arsenic accumulation in indica rice ( <i>Oryza sativa</i> L.) cultivar with ferromanganese oxide impregnated biochar composites amendments. <i>Environmental Pollution</i> , <b>2017</b> , 231, 479-486	9.3 52

798	Recent developments of post-modification of biochar for electrochemical energy storage. <b>2017</b> , 246, 224-233	97
797	Dynamic Effects of Biochar on the Bacterial Community Structure in Soil Contaminated with Polycyclic Aromatic Hydrocarbons. <b>2017</b> , 65, 6789-6796	36
796	Arsenic removal in aqueous solution by a novel Fe-Mn modified biochar composite: Characterization and mechanism. <b>2017</b> , 144, 514-521	120
795	In situ immobilization of Cd by organic amendments and their effect on antioxidant enzyme defense mechanism in mung bean ( <i>Vigna radiata</i> L.) seedlings. <b>2017</b> , 118, 561-570	20
794	Biochar based remediation of water and soil contaminated by phenanthrene and pentachlorophenol. <b>2017</b> , 186, 193-201	45
793	Activity and Reactivity of Pyrogenic Carbonaceous Matter toward Organic Compounds. <b>2017</b> , 51, 8893-8908	137
792	Evaluation of bioaugmentation and biostimulation on arsenic remediation in soil through biovolatilization. <b>2017</b> , 24, 21739-21749	23
791	Tuning the surface properties of biochar by thermal treatment. <b>2017</b> , 246, 28-33	32
790	Sorption of ionizable and ionic organic compounds to biochar, activated carbon and other carbonaceous materials. <b>2017</b> , 124, 673-692	211
789	Metal Immobilization on Wood-Derived Biochars: Distribution and Reactivity of Carbonate Phases. <b>2017</b> , 46, 845-854	12
788	Qualitative and quantitative characterisation of adsorption mechanisms of lead on four biochars. <b>2017</b> , 609, 1401-1410	109
787	Potential Benefits of Biochar in Agricultural Soils: A Review. <b>2017</b> , 27, 645-661	92
786	The effects of biochar and inorganic amendments on soil remediation in the presence of hyperaccumulator plant. <b>2017</b> , 8, 317-329	29
785	Adsorption characteristics of phenol and heavy metals on biochar from <i>Hizikia fusiformis</i> . <b>2017</b> , 76, 1	13
784	Impact of thermal treatment of mixtures of sewage sludge and plant material on selected chemical properties and <i>Vibrio fischeri</i> response. <b>2017</b> , 24, 443-455	
783	Black Carbon (Biochar) In Water/Soil Environments: Molecular Structure, Sorption, Stability, and Potential Risk. <b>2017</b> , 51, 13517-13532	267
782	Biochar from Chinese herb residues as adsorbent for toxic metals removal. <b>2017</b> , 61, 012147	0
781	The role of tailored biochar in increasing plant growth, and reducing bioavailability, phytotoxicity, and uptake of heavy metals in contaminated soil. <i>Environmental Pollution</i> , <b>2017</b> , 230, 329-338	93 78

780	Use of Fe-Impregnated Biochar To Efficiently Sorb Chlorpyrifos, Reduce Uptake by <i>Allium fistulosum</i> L., and Enhance Microbial Community Diversity. <b>2017</b> , 65, 5238-5243	27
779	Assessment of PAH contaminated land: Implementing a risk-based approach. <b>2017</b> , 8, 84-95	8
778	Microfibrillar Polysaccharide-Derived Biochars as Sodium Benzoate Adsorbents. <b>2017</b> , 2, 2959-2966	5
777	A critical review on sustainable biochar system through gasification: Energy and environmental applications. <b>2017</b> , 246, 242-253	188
776	Interactive effects of biochar and an organic dust suppressant for revegetation and erosion control with herbaceous seed mixtures and willow cuttings. <b>2017</b> , 25, 367-375	15
775	The interactions of composting and biochar and their implications for soil amendment and pollution remediation: a review. <b>2017</b> , 37, 754-764	246
774	Effect of biochar activation by different methods on toxicity of soil contaminated by industrial activity. <b>2017</b> , 136, 119-125	67
773	Effects of manganese oxide-modified biochar composites on arsenic speciation and accumulation in an indica rice ( <i>Oryza sativa</i> L.) cultivar. <b>2017</b> , 168, 341-349	100
772	Combination of Fenton processes and biotreatment for wastewater treatment and soil remediation. <b>2017</b> , 574, 1599-1610	236
771	Biochar from Biomass: A Strategy for Carbon Dioxide Sequestration, Soil Amendment, Power Generation, and CO <sub>2</sub> Utilization. <b>2017</b> , 1937-1974	6
770	<i>Jatropha curcas</i> and assisted phytoremediation of a mine tailing with biochar and a mycorrhizal fungus. <b>2017</b> , 19, 174-182	13
769	Differential bioavailability of polychlorinated biphenyls associated with environmental particles: Microplastic in comparison to wood, coal and biochar. <i>Environmental Pollution</i> , <b>2017</b> , 220, 150-158	9.3 122
768	Use of Biochar as an Amendment for Remediation of Heavy Metal-Contaminated Soils: Prospects and Challenges. <b>2017</b> , 27, 991-1014	103
767	Biochar Mitigates Salinity Stress in Plants. <b>2017</b> , 153-182	3
766	Recent advances in engineered biochar productions and applications. <b>2017</b> , 47, 2158-2207	202
765	Biochar Adsorption Treatment for Typical Pollutants Removal in Livestock Wastewater: A Review. <b>2017</b> ,	8
764	. <b>2017</b> ,	3
763	Characterization and Potential Use of Biochar for the Remediation of Coal Mine Waste Containing Efflorescent Salts. <b>2017</b> , 9, 2100	9

762	Management of Animal Carcass Disposal Sites Using a Biochar Permeable Reactive Barrier and Fast Growth Tree ( <i>Populus euramericana</i> ): A Field Study in Korea. <b>2017</b> , 9, 457	5
761	Biochar. <b>2017</b> ,	4
760	Nitrate Leaching from Sand and Pumice Geomedia Amended with Pyrogenic Carbon Materials. <b>2017</b> , 4, 70	
759	Effect of Trichoderma-enriched organic charcoal in the integrated wood protection strategy. <b>2017</b> , 12, e0183004	7
758	Biochar: The Black Diamond for Soil Sustainability, Contamination Control and Agricultural Production. <b>2017</b> ,	10
757	Influence of Biochar on Deposition and Release of Clay Colloids in Saturated Porous Media. <b>2017</b> , 46, 1480-1488	4
756	Role of Biochar Products towards Environmental Management and Technologies: A Brief Review. <b>2018</b> , 5, 104-110	1
755	Biochar-mediated regulation of greenhouse gas emission and toxicity reduction in bioremediation of organophosphorus pesticide-contaminated soils. <b>2018</b> , 26, 2592-2600	19
754	Biochar alleviates the toxicity of imidacloprid and silver nanoparticles (AgNPs) to <i>Enchytraeus albidus</i> ( <i>Oligochaeta</i> ). <b>2018</b> , 25, 10937-10945	8
753	Effect of biochar on fate and transport of manure-borne estrogens in sandy soil. <b>2018</b> , 73, 162-176	11
752	Aging effect of minerals on biochar properties and sorption capacities for atrazine and phenanthrene. <b>2018</b> , 206, 51-58	36
751	Pinewood nanobiochar: A unique carrier for the immobilization of crude laccase by covalent bonding. <b>2018</b> , 115, 563-571	40
750	Lead and uranium sorptive removal from aqueous solution using magnetic and nonmagnetic fast pyrolysis rice husk biochars.. <b>2018</b> , 8, 13205-13217	31
749	Enhanced biochars can match activated carbon performance in sediments with high native bioavailability and low final porewater PCB concentrations. <b>2018</b> , 203, 179-187	9
748	Sorption mechanisms of chlorinated hydrocarbons on biochar produced from different feedstocks: Conclusions from single- and bi-solute experiments. <b>2018</b> , 203, 34-43	26
747	Impacts of biochar and oyster shells waste on the immobilization of arsenic in highly contaminated soils. <b>2018</b> , 217, 646-653	39
746	Reduced bioavailability and plant uptake of polycyclic aromatic hydrocarbons from soil slurry amended with biochars pyrolyzed under various temperatures. <b>2018</b> , 25, 16991-17001	16
745	Trace metal mobilization by organic soil amendments: insights gained from analyses of solid and solution phase complexation of cadmium, nickel and zinc. <b>2018</b> , 199, 684-693	16



744	Effects of biochar amendments on speciation and bioavailability of heavy metals in coal-mine-contaminated soil. <b>2018</b> , 24, 1887-1900	31
743	Impact of organic amendments (biochar, compost and peat) on Cd and Zn mobility and solubility in contaminated soil of the Campine region after three years. <b>2018</b> , 626, 195-202	93
742	Biochar application as a soil amendment for decreasing cadmium availability in soil and accumulation in <i>Brassica chinensis</i> . <b>2018</b> , 18, 2511-2519	20
741	Metals and metalloids treatment in contaminated neutral effluents using modified materials. <b>2018</b> , 212, 142-159	24
740	Characterisation of Biochar Produced by Pyrolysis from Areca Catechu Dust. <b>2018</b> , 5, 2089-2097	13
739	Role of Biochar and Fungi on PAH Sorption to Soil Rich in Organic Matter. <b>2018</b> , 229, 1	4
738	Endosulfan Plant Uptake Suppression Effect on Char Amendment in Oriental Radish. <b>2018</b> , 229, 1	10
737	Biochar and Conservation Agriculture Nexus: Synergy and Research Gaps for Enhanced Sustainable Productivity in Degraded Soils <b>Review</b> . <b>2018</b> , 49, 389-403	6
736	Effect of biochar on growth and ion contents of bean plant under saline condition. <b>2018</b> , 25, 11556-11564	26
735	Comparison of characterization and adsorption of biochars produced from hydrothermal carbonization and pyrolysis. <b>2018</b> , 10, 27-35	62
734	Biochar for Environmental Management: Impacts on the Sorption and Bioavailability of Organic Contaminants in Soil. <b>2018</b> , 217-234	
733	Adsorption and Reaction of Organic Contaminants on Surfaces of Condensed Carbonaceous Materials. <b>2018</b> , 591-603	
732	Incorporation of corn straw biochar inhibited the re-acidification of four acidic soils derived from different parent materials. <b>2018</b> , 25, 9662-9672	27
731	Sorption mechanisms of neonicotinoids on biochars and the impact of deashing treatments on biochar structure and neonicotinoids sorption. <i>Environmental Pollution</i> , <b>2018</b> , 234, 812-820	9.3 56
730	Predicting Cu and Zn sorption capacity of biochar from feedstock C/N ratio and pyrolysis temperature. <b>2018</b> , 25, 7730-7739	30
729	Removal mechanism of di-n-butyl phthalate and oxytetracycline from aqueous solutions by nano-manganese dioxide modified biochar. <b>2018</b> , 25, 7796-7807	38
728	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 <i>Salicaceae</i> species ( <i>Salix viminalis</i> and <i>Populus euramericana</i> ). <b>2018</b> , 194, 316-326	42
727	Rhizoremediation of petroleum hydrocarbon-contaminated soils: Improvement opportunities and field applications. <b>2018</b> , 147, 202-219	56

7 <sup>26</sup>	A novel pyro-hydrochar via sequential carbonization of biomass waste: Preparation, characterization and adsorption capacity. <b>2018</b> , 176, 187-195	47
7 <sup>25</sup>	Sorption, bioavailability and ecotoxic effects of hydrophobic organic compounds in biochar amended soils. <b>2018</b> , 624, 78-86	37
7 <sup>24</sup>	Animal bonechar increases sorption and decreases leaching potential of aminocyclopyrachlor and mesotrione in a tropical soil. <b>2018</b> , 316, 11-18	13
7 <sup>23</sup>	Evaluation of biochars in reducing the bioavailability of flubendiamide in water/sediment using passive sampling with polyoxymethylene. <b>2018</b> , 344, 1000-1006	19
7 <sup>22</sup>	Effects and mechanisms of anionic and nonionic surfactants on biochar removal of chromium. <b>2018</b> , 25, 18443-18450	11
7 <sup>21</sup>	Remediation of an acidic mine spoil: Miscanthus biochar and lime amendment affects metal availability, plant growth, and soil enzyme activity. <b>2018</b> , 205, 709-718	65
7 <sup>20</sup>	Microbe mediated arsenic release from iron minerals and arsenic methylation in rhizosphere controls arsenic fate in soil-rice system after straw incorporation. <i>Environmental Pollution</i> , <b>2018</b> , 236, 598-608	9.3 66
7 <sup>19</sup>	Humic substances, their microbial interactions and effects on biological transformations of organic pollutants in water and soil: A review. <b>2018</b> , 202, 420-437	137
7 <sup>18</sup>	Evaluating cadmium bioavailability in contaminated rice paddy soils and assessing potential for contaminant immobilisation with biochar. <b>2018</b> , 215, 49-56	17
7 <sup>17</sup>	Characterization of metal binding sites onto biochar using rare earth elements as a fingerprint. <b>2018</b> , 4, e00543	31
7 <sup>16</sup>	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. <b>2018</b> , 633, 300-307	133
7 <sup>15</sup>	Bioavailability of Metsulfuron and Sulfentrazone Herbicides in Soil as Affected by Amendment with Two Contrasting Willow Biochars. <b>2018</b> , 100, 298-302	6
7 <sup>14</sup>	Do biochars influence the availability and human oral bioaccessibility of Cd, Pb, and Zn in a contaminated slightly alkaline soil?. <b>2018</b> , 190, 218	15
7 <sup>13</sup>	Compost and biochar assisted phytoremediation potentials of <i>Moringa oleifera</i> for remediation of lead contaminated soil. <b>2018</b> , 6, 2206-2213	20
7 <sup>12</sup>	Polyoxymethylene passive samplers to assess the effectiveness of biochar by reducing the content of freely dissolved fipronil and ethiprole. <b>2018</b> , 630, 960-966	7
7 <sup>11</sup>	Comparison of nickel adsorption on biochars produced from mixed softwood and <i>Miscanthus</i> straw. <b>2018</b> , 25, 14626-14635	26
7 <sup>10</sup>	Dynamic changes in atrazine and phenanthrene sorption behaviors during the aging of biochar in soils. <b>2018</b> , 25, 81-90	19
7 <sup>09</sup>	Enhanced iron(III) reduction following amendment of paddy soils with biochar and glucose modified biochar. <b>2018</b> , 25, 91-103	15

708	Eco-restoration of a mine technosol according to biochar particle size and dose application: study of soil physico-chemical properties and phytostabilization capacities of <i>Salix viminalis</i> . <b>2018</b> , 18, 2188-2202	45
707	Sorption of phenanthrene to biochar modified by base. <b>2018</b> , 12, 1	45
706	Novel approach for removing brominated flame retardant from aquatic environments using Cu/Fe-based metal-organic frameworks: A case of hexabromocyclododecane (HBCD). <b>2018</b> , 621, 1533-1541	37
705	Vermicompost and biochar as bio-conditioners to immobilize heavy metal and improve soil fertility on cadmium contaminated soil under acid rain stress. <b>2018</b> , 621, 1057-1065	60
704	Effects of biochar addition on toxic element concentrations in plants: A meta-analysis. <b>2018</b> , 616-617, 970-977	35
703	Effect of peanut shell and wheat straw biochar on the availability of Cd and Pb in a soil-rice ( <i>Oryza sativa</i> L.) system. <b>2018</b> , 25, 1147-1156	37
702	Strong binding of apolar hydrophobic organic contaminants by dissolved black carbon released from biochar: A mechanism of pseudomicelle partition and environmental implications. <i>Environmental Pollution</i> , <b>2018</b> , 232, 402-410	9.3 58
701	Influence of biochar produced from different pyrolysis temperature on nutrient retention and leaching. <b>2018</b> , 64, 850-859	30
700	Biochar composite membrane for high performance pollutant management: Fabrication, structural characteristics and synergistic mechanisms. <i>Environmental Pollution</i> , <b>2018</b> , 233, 1013-1023	9.3 15
699	Effects of biochar and nitrogen addition on nutrient and Cd uptake of <i>Cichorium intybus</i> grown in acidic soil. <b>2018</b> , 20, 398-404	10
698	Mechanisms of biochar assisted immobilization of Pb by bioapatite in aqueous solution. <b>2018</b> , 190, 260-266	46
697	Effect of biochar on photosynthetic microorganism growth and iron cycling in paddy soil under different phosphate levels. <b>2018</b> , 612, 223-230	21
696	Chemical stabilization of Cd-contaminated soil using biochar. <b>2018</b> , 88, 122-130	54
695	An innovative biochar-amended substrate vertical flow constructed wetland for low C/N wastewater treatment: Impact of influent strengths. <b>2018</b> , 247, 844-850	78
694	Investigating the performance of biomass-derived biochars for the removal of gaseous ozone, adsorbed nitrate and aqueous bisphenol A. <b>2018</b> , 334, 2098-2104	28
693	Biochar decreased the bioavailability of Zn to rice and wheat grains: Insights from microscopic to macroscopic scales. <b>2018</b> , 621, 160-167	21
692	Phosphorus-loaded biochar changes soil heavy metals availability and uptake potential of maize ( <i>Zea mays</i> L.) plants. <b>2018</b> , 194, 327-339	75
691	Transcriptional Activity of Arsenic-Reducing Bacteria and Genes Regulated by Lactate and Biochar during Arsenic Transformation in Flooded Paddy Soil. <b>2018</b> , 52, 61-70	66

690	Biochar chemistry defined by <sup>13</sup> C-CPMAS NMR explains opposite effects on soilborne microbes and crop plants. <b>2018</b> , 124, 351-361	12
689	Phosphorus recovery and reuse by pyrolysis: Applications for agriculture and environment. <b>2018</b> , 194, 682-691	56
688	Simultaneous alleviation of cadmium and arsenic accumulation in rice by applying zero-valent iron and biochar to contaminated paddy soils. <b>2018</b> , 195, 260-271	167
687	Production of bio-fertilizer from microwave vacuum pyrolysis of palm kernel shell for cultivation of Oyster mushroom ( <i>Pleurotus ostreatus</i> ). <b>2018</b> , 624, 9-16	72
686	Biochar application for the remediation of heavy metal polluted land: A review of in situ field trials. <b>2018</b> , 619-620, 815-826	310
685	Biochar-organic amendment mixtures added to simulated golf greens under reduced chemical fertilization increase creeping bentgrass growth. <b>2018</b> , 111, 667-672	10
684	Response surface methodology optimization for sorption of malachite green dye on sugarcane bagasse biochar and evaluating the residual dye for phyto and cytogenotoxicity. <b>2018</b> , 194, 306-315	83
683	Application of the N tracer method to study the effect of pyrolysis temperature and atmosphere on the distribution of biochar nitrogen in the biomass-biochar-plant system. <b>2018</b> , 622-623, 79-87	20
682	Biochar alleviates phytotoxicity in <i>Ficus elastica</i> grown in Zn-contaminated soil. <b>2018</b> , 618, 188-198	35
681	Biochar effects on uptake of cadmium and lead by wheat in relation to annual precipitation: a 3-year field study. <b>2018</b> , 25, 3368-3377	35
680	Release of nutrients and heavy metals from biochar-amended soil under environmentally relevant conditions. <b>2018</b> , 25, 2517-2527	23
679	Immobilisation of metals in a contaminated soil with biochar-compost mixtures and inorganic additives: 2-year greenhouse and field experiments. <b>2018</b> , 25, 2506-2516	18
678	Cd, Pb, and Zn mobility and (bio)availability in contaminated soils from a former smelting site amended with biochar. <b>2018</b> , 25, 25744-25756	31
677	Sugarcane bagasse-derived biochar reduces the cadmium and chromium bioavailability to mash bean and enhances the microbial activity in contaminated soil. <b>2018</b> , 18, 874-886	74
676	Biochar accelerates microbial reductive debromination of 2,2',4,4'-tetrabromodiphenyl ether (BDE-47) in anaerobic mangrove sediments. <b>2018</b> , 341, 177-186	63
675	Distribution Assessment and Source Identification Using Multivariate Statistical Analyses and Artificial Neural Networks for Trace Elements in Agricultural Soils in Xinzhou of Shanxi Province, China. <b>2018</b> , 28, 542-554	4
674	Review on utilization of biochar for metal-contaminated soil and sediment remediation. <b>2018</b> , 63, 156-173	132
673	Advancing Soil Physics for Securing Food, Water, Soil and Ecosystem Services. <b>2018</b> , 17, 1-7	3

672	Performance and Emissions Control of Commercial-Scale Biochar Production Unit. <b>2018</b> , 34, 73-84	5
671	Arsenic in Rice Soils and Potential Agronomic Mitigation Strategies to Reduce Arsenic Bioavailability: A Review. <b>2018</b> , 28, 363-382	28
670	Biotechnological Strategies for Effective Remediation of Polluted Soils. <b>2018</b> ,	11
669	The application of biochar to screen printing liquid waste polluted land, its effect in soil, mustard greens to heavy metals (Fe, Cr). <b>2018</b> , 22, 224-234	2
668	Using Organic Amendments to Restore Soil Physical and Chemical Properties of a Mine Site in Northeastern Oregon, USA. <b>2018</b> , 34, 43-55	13
667	Biochar and Soil Remediation. <b>2018</b> , 85-99	
666	The Effect of Biochar on Residual Polyaromatic Hydrocarbon Concentrations in Bioremediation. <b>2018</b> ,	
665	Growth, biochemical response and nutritional status of Angico-Vermelho ( <i>Parapiptadenia rigida</i> (Bentham) Brenan) under the application of soil amendment in Cu-contaminated soil. <b>2018</b> , 20, 1380-1388	2
664	Decontamination of Methylene Blue from Aqueous Solution by Rhamnolipid-modified Biochar. <b>2018</b> , 13,	8
663	Effects of softwood biochar on the status of nitrogen species and elements of potential toxicity in soils. <b>2018</b> , 166, 383-389	10
662	Contrasting dynamics of polychlorinated biphenyl dissipation and fungal community composition in low and high organic carbon soils with biochar amendment. <b>2018</b> , 25, 33432-33442	9
661	Comparative effect of compost and technosol enhanced with biochar on the fertility of a degraded soil. <b>2018</b> , 190, 610	7
660	A critical review of the occurrence of perfluoroalkyl acids in aqueous environments and their removal by adsorption onto carbon nanotubes. <b>2018</b> , 17, 603-635	15
659	Effect of Fe-functionalized biochar on toxicity of a technosol contaminated by Pb and As: sorption and phytotoxicity tests. <b>2018</b> , 25, 33678-33690	19
658	An overview of field-scale studies on remediation of soil contaminated with heavy metals and metalloids: Technical progress over the last decade. <b>2018</b> , 147, 440-460	170
657	Effects of bacterial-feeding nematodes and organic matter on microbial activity and oil degradation in contaminated soil. <b>2018</b> , 25, 35614-35622	7
656	Biochar and Biomass Ash as a Soil Ameliorant: The Effect on Selected Soil Properties and Yield of Giant Miscanthus ( <i>Miscanthus x giganteus</i> ). <b>2018</b> , 11, 2535	28
655	Effects of Poultry-Litter Biochar on Soil Properties and Growth of Water Spinach ( <i>Ipomoea aquatica</i> Forsk.). <b>2018</b> , 10, 2536	7

- 654 Quantitative mechanisms of cadmium adsorption on rice straw- and swine manure-derived biochars. **2018**, 25, 32418-32432 23
- 653 The influence of pilot-scale pyro-gasification and activation conditions on porosity development in activated biochars. **2018**, 118, 105-114 15
- 652 Exploration of nano carbons in relevance to plant systems. **2018**, 42, 16411-16427 26
- 651 Spectroscopic analyses to study the effect of biochar and compost on dry mass of canola and heavy metal immobilization in soil. **2018**, 49, 1990-2001 12
- 650 Combined application of biochar, compost, and bacterial consortia with Italian ryegrass enhanced phytoremediation of petroleum hydrocarbon contaminated soil. **2018**, 153, 80-88 74
- 649 Successes in Application of Biotechnologies to Mine Land Remediation in the Russian Sub-Arctic. **2018**, 547-570 3
- 648 Effects of biochar on availability and plant uptake of heavy metals - A meta-analysis. **2018**, 222, 76-85 97
- 647 Water clusters contributed to molecular interactions of ionizable organic pollutants with aromatized biochar via EPAHB: Sorption experiments and DFT calculations. *Environmental Pollution*, **2018**, 240, 342-352 9.3 23
- 646 Biochar from sewage sludge and pruning trees reduced porewater Cd, Pb and Zn concentrations in acidic, but not basic, mine soils under hydric conditions. **2018**, 223, 554-565 17
- 645 Scavenging of Cr(VI) from aqueous solutions by sulfide-modified nanoscale zero-valent iron supported by biochar. **2018**, 91, 449-456 47
- 644 Effect of cassava waste biochar on sorption and release behavior of atrazine in soil. **2018**, 644, 1617-1624 16
- 643 Remediation effectiveness of *Phyllostachys pubescens* biochar in reducing the bioavailability and bioaccumulation of metals in sediments. *Environmental Pollution*, **2018**, 242, 1768-1776 9.3 35
- 642 Biochar as a Carrier of Struvite Precipitation for Nitrogen and Phosphorus Recovery from Urine. **2018**, 144, 04018101 13
- 641 Dynamic changes of polychlorinated biphenyls (PCBs) degradation and adsorption to biochar as affected by soil organic carbon content. **2018**, 211, 120-127 27
- 640 Effect of aging in field soil on biochar's properties and its sorption capacity. *Environmental Pollution*, **2018**, 242, 1880-1886 9.3 34
- 639 Potential of *Cassia alata* L. Coupled with Biochar for Heavy Metal Stabilization in Multi-Metal Mine Tailings. **2018**, 15, 18
- 638 Biochar from Biosolids Pyrolysis: A Review. **2018**, 15, 93
- 637 Sludge Biochar Amendment and Alfalfa Revegetation Improve Soil Physicochemical Properties and Increase Diversity of Soil Microbes in Soils from a Rare Earth Element Mining Wasteland. **2018**, 15, 13

636	The Effects of Gliricidia-Derived Biochar on Sequential Maize and Bean Farming. <b>2018</b> , 10, 578	9
635	A Rapid-Test for Screening Biochar Effects on Seed Germination. <b>2018</b> , 49, 2025-2041	8
634	Sorptive removal of phenanthrene from aqueous solutions using magnetic and non-magnetic rice husk-derived biochars. <b>2018</b> , 5, 172382	21
633	Effect of modified coconut shell biochar on availability of heavy metals and biochemical characteristics of soil in multiple heavy metals contaminated soil. <b>2018</b> , 645, 702-709	104
632	Assisted Phytoremediation of a Multi-contaminated Industrial Soil Using Biochar and Garden Soil Amendments Associated with <i>Salix alba</i> or <i>Salix viminalis</i> : Abilities to Stabilize As, Pb, and Cu. <b>2018</b> , 229, 1	12
631	Remediating Montreal Tree Pit Soil Applying an Ash Tree-Derived Biochar. <b>2018</b> , 229, 1	2
630	Humic acid and biochar as specific sorbents of pesticides. <b>2018</b> , 18, 2692-2702	42
629	Capacity and mechanism of arsenic adsorption on red soil supplemented with ferromanganese oxide-biochar composites. <b>2018</b> , 25, 20116-20124	8
628	<i>Caesalpinia ferrea</i> Fruits as a Biosorbent for the Removal of Methylene Blue Dye from an Aqueous Medium. <b>2018</b> , 229, 1	13
627	Effect of biochar from peanut shell on speciation and availability of lead and zinc in an acidic paddy soil. <b>2018</b> , 164, 554-561	36
626	Change in nutrient composition of biochar from rice husk and sugarcane bagasse at varying pyrolytic temperatures. <b>2018</b> , 7, 269-276	21
625	Desorption of atrazine in biochar-amended soils: Effects of root exudates and the aging interactions between biochar and soil. <b>2018</b> , 212, 687-693	18
624	Remediation of Polychlorinated Biphenyls (PCBs) in Contaminated Soils and Sediment: State of Knowledge and Perspectives. <b>2018</b> , 6,	56
623	A critical review of mechanisms involved in the adsorption of organic and inorganic contaminants through biochar. <b>2018</b> , 11, 1	68
622	Properties and Beneficial Uses of (Bio)Chars, with Special Attention to Products from Sewage Sludge Pyrolysis. <b>2018</b> , 7, 20	51
621	Biochars from olive mill waste have contrasting effects on plants, fungi and phytoparasitic nematodes. <b>2018</b> , 13, e0198728	24
620	Effects of biochars on the fate of acetochlor in soil and on its uptake in maize seedling. <i>Environmental Pollution</i> , <b>2018</b> , 241, 710-719	9.3 26
619	Soil Erosion and C Losses: Strategies for Building Soil Carbon. <b>2018</b> , 215-238	5



618	Potential of Biochar as a Measure for Decreasing Bioavailability of $^{137}\text{Cs}$ in Soil. <b>2019</b> , 113-137	1
617	Remediation Measures for Radioactively Contaminated Areas. <b>2019</b> ,	3
616	Biochar reduces cadmium accumulation in rice grains in a tungsten mining area-field experiment: effects of biochar type and dosage, rice variety, and pollution level. <b>2019</b> , 41, 43-52	26
615	Application of pyrogenic carbonaceous product for immobilisation of potentially toxic elements in railway sleepers and polluted soil. <b>2019</b> , 16, 23-36	3
614	Release of nutrients and organic carbon in different soil types from hydrochar obtained using sugarcane bagasse and vinasse. <b>2019</b> , 334, 24-32	43
613	Co-plasma processing of banana peduncle with phosphogypsum waste for production of lesser toxic potassiumSulfur rich biochar. <b>2019</b> , 21, 107-115	15
612	Revisiting the potential of carbonized grain to preserve biogenic $^{87}\text{Sr}/^{86}\text{Sr}$ signatures within the burial environment. <b>2019</b> , 61, 179-193	6
611	Co-application of activated carbon and compost to contaminated soils: toxic elements mobility and PAH degradation and availability. <b>2019</b> , 16, 1057-1068	12
610	Quantification and characterization of dissolved organic carbon from biochars. <b>2019</b> , 335, 161-169	74
609	Effect of sulfur-iron modified biochar on the available cadmium and bacterial community structure in contaminated soils. <b>2019</b> , 647, 1158-1168	108
608	Does Biochar Induce Similar Successions of Microbial Community Structures Among Different Soils?. <b>2019</b> , 103, 642-650	8
607	Preparation of biochar with high absorbability and its nutrient adsorption-desorption behaviour. <b>2019</b> , 694, 133728	30
606	Phase Equilibria of the Co-Ti-Ru Ternary System. <b>2019</b> , 40, 561-569	2
605	Biochar particle aggregation in soil pore water: the influence of ionic strength and interactions with pyrene. <b>2019</b> , 21, 1722-1728	4
604	Urea/nitric acid co-impregnated pitch-based activated carbon fiber for the effective removal of formaldehyde. <b>2019</b> , 80, 98-105	14
603	Phytostabilization of Zn and Cd in Mine Soil Using Corn in Combination with Biochars and Manure-Based Compost. <b>2019</b> , 6, 69	12
602	Differentiation between physical and chemical effects of oil presence in freshly spiked soil during rhizoremediation trial. <b>2019</b> , 26, 18451-18464	25
601	Development of the straw biochar returning concept in China. <b>2019</b> , 1, 139-149	17



600	Using biochar to purify runoff in road verges of urbanised watersheds: A large-scale field lysimeter study. <b>2019</b> , 1, 15-25	12
599	Effects of root exudates on the sorption of polycyclic aromatic hydrocarbons onto biochar. <b>2019</b> , 31, 156-165	7
598	Potential use of biochar, compost and iron grit associated with <i>Trifolium repens</i> to stabilize Pb and As on a multi-contaminated technosol. <b>2019</b> , 182, 109432	15
597	Functionalized Biochar/Clay Composites for Reducing the Bioavailable Fraction of Arsenic and Cadmium in River Sediment. <b>2019</b> , 38, 2337-2347	31
596	The applicability of biochar and zero-valent iron for the mitigation of arsenic and cadmium contamination in an alkaline paddy soil. <b>2019</b> , 1, 203-212	24
595	Biochar and high-carbon wood ash effects on soil and vegetation in a boreal clearcut. <b>2019</b> , 49, 1124-1134	20
594	Biomass growth variation and phytoextraction potential of four varieties grown in contaminated soil amended with lime and wood ash. <b>2019</b> , 21, 1329-1340	7
593	Effects of biochar amendment on the availability of trace elements and the properties of dissolved organic matter in contaminated soils. <b>2019</b> , 16, 100492	15
592	A Critical Insight into Biomass Derived Biosorbent for Bioremediation of Dyes. <b>2019</b> , 4, 9762-9775	6
591	Biochar: A Sustainable Approach for Improving Plant Growth and Soil Properties. <b>2019</b> ,	62
590	Sewage sludge derived biochars provoke negative effects on wheat growth related to the PTEs. <b>2019</b> , 152, 107386	11
589	Wood biochars and vermicomposts from digestate modulate the extent of adsorption-desorption of the fungicide metalaxyl-m in a silty soil. <b>2019</b> , 26, 35924-35934	8
588	Reducing arsenic and groundwater contaminants down to safe level for drinking purposes via Fe-attached hybrid column. <b>2019</b> , 191, 722	6
587	Remediation of organic halogen- contaminated wetland soils using biochar. <b>2019</b> , 696, 134087	14
586	Environmental Effects of Silicon within Biochar (Sichar) and Carbon-Silicon Coupling Mechanisms: A Critical Review. <b>2019</b> , 53, 13570-13582	39
585	How Can Organic Amendments Help to Bind Sulfadiazine in the Soil? [An Iranian Soil Study. <b>2019</b> , 50, 2397-2410	2
584	The impact of biochar on soil carbon sequestration: Meta-analytical approach to evaluating environmental and economic advantages. <b>2019</b> , 250, 109466	40
583	Influence of amendments on metal environmental and toxicological availability in highly contaminated brownfield and agricultural soils. <b>2019</b> , 26, 33086-33108	8

582	Biochar alleviates Cd phytotoxicity by minimizing bioavailability and oxidative stress in pak choi ( <i>Brassica chinensis</i> L.) cultivated in Cd-polluted soil. <b>2019</b> , 250, 109500		89
581	Effect of Biochar Amendments on the Sorption and Desorption Herbicides in Agricultural Soil. <b>2019</b> , 250, 109500		2
580	Effects of pH and gallic acid on the adsorption of two ionizable organic contaminants to rice straw-derived biochar-amended soils. <b>2019</b> , 184, 109656		7
579	Infiltration behavior of heavy metals in runoff through soil amended with biochar as bulking agent. <i>Environmental Pollution</i> , <b>2019</b> , 254, 113114	9.3	16
578	Characterization of biochars derived from different materials and their effects on microbial dechlorination of pentachlorophenol in a consortium.. <b>2019</b> , 9, 917-923		14
577	Adsorption and reductive degradation of Cr(VI) and TCE by a simply synthesized zero valent iron magnetic biochar. <b>2019</b> , 235, 276-281		65
576	Effect of Biochar on Microbial Growth: A Metabolomics and Bacteriological Investigation in <i>E. coli</i> . <b>2019</b> , 53, 2635-2646		39
575	Adsorption of Pb <sup>2+</sup> by ameliorated alum plasma in water and soil. <b>2019</b> , 14, e0210614		
574	Effects of soil amendments on the growth response and phytoextraction capability of a willow variety ( <i>S. viminalis</i> [S. schwerinii] S. dasyclados) grown in contaminated soils. <b>2019</b> , 171, 753-770		15
573	Biochar effect associated with compost and iron to promote Pb and As soil stabilization and <i>Salix viminalis</i> L. growth. <b>2019</b> , 222, 810-822		51
572	Biochar for environmental management: Mitigating greenhouse gas emissions, contaminant treatment, and potential negative impacts. <b>2019</b> , 373, 902-922		147
571	Cadmium immobilization and alleviation of its toxicity for soybean grown in a clay loam contaminated soil using sugarcane bagasse-derived biochar. <b>2019</b> , 26, 21849-21857		12
570	Multianalytical characterization of biochar and hydrochar produced from waste biomasses for environmental and agricultural applications. <b>2019</b> , 233, 422-430		51
569	Phytolith-rich biochar: A potential Si fertilizer in desilicated soils. <b>2019</b> , 11, 1264-1282		53
568	Metal sorption by biochars: A trade-off between phosphate and carbonate concentration as governed by pyrolysis conditions. <b>2019</b> , 246, 496-504		11
567	Capability of amendments (biochar, compost and garden soil) added to a mining technosol contaminated by Pb and As to allow poplar seed ( <i>Populus nigra</i> L.) germination. <b>2019</b> , 191, 465		16
566	A novel clean production approach to utilize crop waste residues as co-diet for mealworm ( <i>Tenebrio molitor</i> ) biomass production with biochar as byproduct for heavy metal removal. <i>Environmental Pollution</i> , <b>2019</b> , 252, 1142-1153	9.3	40
565	Biochar and ash derived from silicon-rich rice husk decrease inorganic arsenic species in rice grain. <b>2019</b> , 684, 360-370		17

564	Phytoremediation of multi-metal contaminated mine tailings with <i>Solanum nigrum</i> L. and biochar/attapulgitic amendments. <b>2019</b> , 180, 517-525	24
563	Long-term sorption of lincomycin to biochars: The intertwined roles of pore diffusion and dissolved organic carbon. <b>2019</b> , 161, 108-118	19
562	Biochar-supported nanomaterials for environmental applications. <b>2019</b> , 78, 21-33	47
561	Remediation of complex remazol effluent using biochar derived from green seaweed biomass. <b>2019</b> , 21, 1179-1189	23
560	Concurrent transport and removal of nitrate, phosphate and pesticides in low-cost metal- and carbon-based materials. <b>2019</b> , 230, 84-91	12
559	Preparation, modification and environmental application of biochar: A review. <b>2019</b> , 227, 1002-1022	587
558	Variation in Feedstock Wood Chemistry Strongly Influences Biochar Liming Potential. <b>2019</b> , 3, 26	19
557	Response of microbial communities to biochar-amended soils: a critical review. <b>2019</b> , 1, 3-22	175
556	Two years impacts of rapeseed residue and rice straw biochar on Pb and Cu immobilization and revegetation of naturally co-contaminated soil. <b>2019</b> , 105, 97-104	13
555	Surface-Modified Biochar with Polydentate Binding Sites for the Removal of Cadmium. <b>2019</b> , 20,	11
554	Agronomic Management for Cadmium Stress Mitigation. <b>2019</b> , 69-112	
553	Co-pyrolysis of sewage sludge and cotton stalks. <b>2019</b> , 89, 430-438	62
552	From waste to resource: Sorption properties of biological and industrial sludge. <b>2019</b> , 595-621	2
551	Phosphorus adsorption onto an enriched biochar substrate in constructed wetlands treating wastewater. <b>2019</b> , 1, 100005	32
550	Assessing the effect of pyrolysis temperature on the molecular properties and copper sorption capacity of a halophyte biochar. <i>Environmental Pollution</i> , <b>2019</b> , 251, 56-65	9-3 50
549	Enhanced Pb immobilization via the combination of biochar and phosphate solubilizing bacteria. <b>2019</b> , 127, 395-401	82
548	Biochar composition-dependent impacts on soil nutrient release, carbon mineralization, and potential environmental risk: A review. <b>2019</b> , 241, 458-467	145
547	Impacts of activated carbon amendments, added from the start or after five months, on the microbiology and outcomes of crude oil bioremediation in soil. <b>2019</b> , 142, 1-10	13

546	Long-term soil biological fertility, volatile organic compounds and chemical properties in a vineyard soil after biochar amendment. <b>2019</b> , 344, 127-136	31
545	Renewable Biomass-Derived Hierarchically Porous Carbonaceous Sponge (CS)/g-C <sub>3</sub> N <sub>4</sub> Composites as Adsorption and Photocatalytic Materials. <b>2019</b> , 4, 3233-3240	0
544	Novel soil remediation technology for simultaneous organic pollutant catalytic degradation and nitrogen supplementation. <b>2019</b> , 370, 27-36	13
543	Biochar Particle Size and Post-Pyrolysis Mechanical Processing Affect Soil pH, Water Retention Capacity, and Plant Performance. <b>2019</b> , 3, 14	42
542	Effects of Land Use and Restoration on Soil Microbial Communities. <b>2019</b> , 173-242	2
541	Understanding Terrestrial Microbial Communities. <b>2019</b> ,	0
540	Biomass derived porous carbon for CO <sub>2</sub> capture. <b>2019</b> , 148, 164-186	197
539	Potentially hazardous element accumulation in rice tissues and their availability in soil systems after biochar amendments. <b>2019</b> , 19, 2957-2970	9
538	Oxidative ageing induces change in the functionality of biochar and hydrochar: Mechanistic insights from sorption of atrazine. <i>Environmental Pollution</i> , <b>2019</b> , 249, 1002-1010	9.3 26
537	Biochar as a Multifunctional Component of the Environment: A Review. <b>2019</b> , 9, 1139	39
536	Prospects of nanocarbons in agriculture. <b>2019</b> , 287-326	1
535	Fast pyrolysis of fermentation residue derived from <i>Saccharina japonica</i> for a hybrid biological and thermal process. <b>2019</b> , 170, 239-249	7
534	Decontamination of Cr(VI) facilitated formation of persistent free radicals on rice husk derived biochar. <b>2019</b> , 13, 1	18
533	Can polyethylene passive samplers predict polychlorinated biphenyls (PCBs) uptake by earthworms and turnips in a biochar amended soil?. <b>2019</b> , 662, 873-880	10
532	Reducing arsenic in rice grains by leonardite and arsenic-resistant endophytic bacteria. <b>2019</b> , 223, 448-454	31
531	The effect of two different biochars on remediation of Cd-contaminated soil and Cd uptake by <i>Lolium perenne</i> . <b>2019</b> , 41, 2067-2080	3
530	Biochar amendment alters the relation between the Pb distribution and biological activities in soil. <b>2019</b> , 16, 8595-8606	6
529	Ideas and perspectives: Synergies from co-deployment of negative emission technologies. <b>2019</b> , 16, 2949-2960	10

528	Phycoremediation of industrial effluents contaminated soils. <b>2019</b> , 245-258	4
527	Biochar implications for sustainable agriculture and environment: A review. <b>2019</b> , 127, 333-347	49
526	Methane and Nitrous Oxide Flux after Biochar Application in Subtropical Acidic Paddy Soils under Tobacco-Rice Rotation. <b>2019</b> , 9, 17277	21
525	Current status and challenges of remediating petroleum-derived PAHs in soils: Nigeria as a case study for developing countries. <b>2019</b> , 30, 65-75	8
524	Turning pig manure into biochar can effectively mitigate antibiotic resistance genes as organic fertilizer. <b>2019</b> , 649, 902-908	50
523	The karrikin 'calisthenics': Can compounds derived from smoke help in stress tolerance?. <b>2019</b> , 165, 290-302	20
522	Assessment of biochar and zero-valent iron for in-situ remediation of chromated copper arsenate contaminated soil. <b>2019</b> , 655, 414-422	41
521	Cyanobacterial Bioenergy and Biofuels Science and Technology: A Scientometric Overview. <b>2019</b> , 419-442	1
520	Assessing biochar impact on earthworms: Implications for soil quality promotion. <b>2019</b> , 366, 582-591	28
519	Recycling solvent system in phosphoric acid plus hydrogen peroxide pretreatment towards a more sustainable lignocellulose biorefinery for bioethanol. <b>2019</b> , 275, 19-26	16
518	Review of biochar for the management of contaminated soil: Preparation, application and prospect. <b>2019</b> , 659, 473-490	164
517	Sorption, degradation and bioavailability of oxyfluorfen in biochar-amended soils. <b>2019</b> , 658, 87-94	43
516	Production and Characterisation of Teak Tree Saw Dust and Rice Husk Biochar. <b>2019</b> , 291-306	1
515	Utilization of rice hull and straw. <b>2019</b> , 627-661	7
514	Elemental and Spectroscopic Characterization of Low-Temperature (350°C) Lignocellulosic- and Manure-Based Designer Biochars and Their Use as Soil Amendments. <b>2019</b> , 37-58	6
513	Potential of Biochar for Managing Metal Contaminated Areas, in Synergy With Phytomanagement or Other Management Options. <b>2019</b> , 91-111	4
512	Pollutants from Energy Sources. <b>2019</b> ,	4
511	Mobility of Pb, Zn, Ba, As and Cd toward soil pore water and plants (willow and ryegrass) from a mine soil amended with biochar. <b>2019</b> , 232, 117-130	34

510	Organic residues and biochar to immobilize potentially toxic elements in soil from a gold mine in the Amazon. <b>2019</b> , 169, 425-434		16
509	Effects of biochar on growth, and heavy metals accumulation of moso bamboo ( <i>Phyllostachy pubescens</i> ), soil physical properties, and heavy metals solubility in soil. <b>2019</b> , 219, 510-516		68
508	Adsorption behaviour and mechanisms of cadmium and nickel on rice straw biochars in single- and binary-metal systems. <b>2019</b> , 218, 308-318		88
507	Phytoextraction of Ni from a toxic industrial sludge amended with biochar. <b>2019</b> , 196, 173-181		11
506	Insight into interaction between biochar and soil minerals in changing biochar properties and adsorption capacities for sulfamethoxazole. <i>Environmental Pollution</i> , <b>2019</b> , 245, 208-217	9.3	40
505	Biochar as both electron donor and electron shuttle for the reduction transformation of Cr(VI) during its sorption. <i>Environmental Pollution</i> , <b>2019</b> , 244, 423-430	9.3	146
504	Combined effects of maize straw biochar and oxalic acid on the dissipation of polycyclic aromatic hydrocarbons and microbial community structures in soil: A mechanistic study. <b>2019</b> , 364, 325-331		47
503	Biochar for Effective Cleaning of Contaminated Dumpsite Soil: A Sustainable and Cost-Effective Remediation Technique for Developing Nations. <b>2019</b> , 3-29		
502	In situ chemical stabilization of trace element-contaminated soil [Field demonstrations and barriers to transition from laboratory to the field] A review. <b>2019</b> , 100, 335-351		48
501	Response of summer savory at two different growth stages to biochar amendment under NaCl stress. <b>2019</b> , 65, 1120-1133		6
500	Biochar application to low fertility soils: A review of current status, and future prospects. <b>2019</b> , 337, 536-554		357
499	Effects of Fe-Mn modified biochar composite treatment on the properties of As-polluted paddy soil. <i>Environmental Pollution</i> , <b>2019</b> , 244, 600-607	9.3	40
498	Modeling aqueous contaminant removal due to combined hydrolysis and adsorption: oxytetracycline in the presence of biomass-based activated carbons. <b>2019</b> , 54, 705-721		3
497	Impacts of biochar application rates and particle sizes on runoff and soil loss in small cultivated loess plots under simulated rainfall. <b>2019</b> , 649, 1403-1413		45
496	Modification of tea biochar with Mg, Fe, Mn and Al salts for efficient sorption of PO <sub>4</sub> <sup>3-</sup> and Cd <sup>2+</sup> from aqueous solutions. <b>2019</b> , 9, 57-66		23
495	Peat moss-derived biochars as effective sorbents for VOCs' removal in groundwater. <b>2019</b> , 41, 1637-1646		13
494	Potential toxicity of trace elements and nanomaterials to Chinese cabbage in arsenic- and lead-contaminated soil amended with biochars. <b>2019</b> , 41, 1777-1791		15
493	Progresses in restoration of post-mining landscape in Africa. <b>2019</b> , 30, 381-396		66

492	Characteristics of biochars prepared by co-pyrolysis of sewage sludge and cotton stalk intended for use as soil amendments. <b>2020</b> , 41, 1347-1357	19
491	Cadmium bioavailability in acidic soils under bean cultivation: role of soil additives. <b>2020</b> , 17, 153-160	8
490	Ecotoxicological assessments of biochar additions to soil employing earthworm species <i>Eisenia fetida</i> and <i>Lumbricus terrestris</i> . <b>2020</b> , 27, 33410-33418	12
489	<i>Arundo donax</i> L. stem-derived biochar increases As and Sb toxicities from nonferrous metal mine tailings. <b>2020</b> , 27, 2433-2443	7
488	Metal(loid)s (As, Hg, Se, Pb and Cd) in paddy soil: Bioavailability and potential risk to human health. <b>2020</b> , 699, 134330	104
487	Understanding structure-performance correlation of biochar materials in environmental remediation and electrochemical devices. <b>2020</b> , 382, 122977	59
486	Overview of biochar production from preservative-treated wood with detailed analysis of biochar characteristics, heavy metals behaviors, and their ecotoxicity. <b>2020</b> , 384, 121356	45
485	Dissipation and sorption processes of polycyclic aromatic hydrocarbons (PAHs) to organic matter in soils amended by exogenous rich-carbon material. <b>2020</b> , 20, 836-849	16
484	Effect of thiourea-modified biochar on adsorption and fractionation of cadmium and lead in contaminated acidic soil. <b>2020</b> , 22, 468-481	18
483	Long noncoding RNA PTENP1 affects the recovery of spinal cord injury by regulating the expression of miR-19b and miR-21. <b>2020</b> , 235, 3634-3645	12
482	Changes in biochar properties in typical loess soil under a 5-year field experiment. <b>2020</b> , 20, 340-351	13
481	In situ immobilization of Cr and its availability to maize plants in tannery waste-contaminated soil: effects of biochar feedstock and pyrolysis temperature. <b>2020</b> , 20, 330-339	16
480	Characterization of phosphorus engineered biochar and its impact on immobilization of Cd and Pb from smelting contaminated soils. <b>2020</b> , 20, 3041-3052	27
479	Vermiremediation of organically contaminated soils: Concepts, current status, and future perspectives. <b>2020</b> , 147, 103377	26
478	Application of co-composted biochar significantly improved plant-growth relevant physical/chemical properties of a metal contaminated soil. <b>2020</b> , 242, 125255	27
477	Biochar for delivery of agri-inputs: Current status and future perspectives. <b>2020</b> , 703, 134892	24
476	Nitrogen combined with biochar changed the feedback mechanism between soil nitrification and Cd availability in an acidic soil. <b>2020</b> , 390, 121631	14
475	Occurrence, formation, environmental fate and risks of environmentally persistent free radicals in biochars. <b>2020</b> , 134, 105172	54

- 474 Effects of inorganic and organic amendments on physiological parameters and antioxidant enzymes activities in *Zea mays* L. from a cadmium-contaminated calcareous soil. **2020**, 128, 132-140 12
- 473 Dynamic processes in conjunction with microbial response to disclose the biochar effect on pentachlorophenol degradation under both aerobic and anaerobic conditions. **2020**, 384, 121503 19
- 472 Effects of biochar nanoparticles on seed germination and seedling growth. *Environmental Pollution*, **2020**, 256, 113409 9.3 24
- 471 The effects of biochar as the electron shuttle on the ferrihydrite reduction and related arsenic (As) fate. **2020**, 390, 121391 21
- 470 Biochar on Soil Fertility and Crop Productivity. **2020**, 17, 76-88 3
- 469 Application of Biochar as an Adsorbent and Its Significance on Berseem (*Trifolium alexandrinum*) Growth Parameters in Farm Soil Contaminated with PAH. **2020**, 20, 806-819 6
- 468 Sustainable removal of Hg(II) by sulfur-modified pine-needle biochar. **2020**, 388, 122048 40
- 467 Carbonization: A feasible route for reutilization of plastic wastes. **2020**, 710, 136250 53
- 466 Improved lead removal from aqueous solution using novel porous bentonite - and calcite-biochar composite. **2020**, 709, 136171 48
- 465 Aggregation-dependent electron transfer via redox-active biochar particles stimulate microbial ferrihydrite reduction. **2020**, 703, 135515 27
- 464 Ex situ evaluation of the effects of biochars on environmental and toxicological availabilities of metals and polycyclic aromatic hydrocarbons. **2020**, 27, 1852-1869 6
- 463 Assessing cadmium availability of contaminated saline-sodic soils as influenced by biochar using the adsorption isotherm models. **2020**, 66, 1735-1752 7
- 462 Particle size and rate of biochar affected the phytoavailability of Cd and Pb by mustard plants grown in contaminated soils. **2020**, 22, 567-577 4
- 461 Preparation, environmental application and prospect of biochar-supported metal nanoparticles: A review. **2020**, 388, 122026 71
- 460 Surface and colloid properties of biochar and implications for transport in porous media. **2020**, 50, 2484-2522 13
- 459 Response of Rhizobacterial Community to Biochar Amendment in Coal Mining Soils with *Brachiaria Decumbens* as Pioneer Plant. **2020**, 29, 26-42 0
- 458 Effects of amendments and aided phytostabilization of an energy crop on the metal availability and leaching in mine tailings using a pot test. **2020**, 27, 2745-2759 6
- 457 Biochar reduced Chinese chive (*Allium tuberosum*) uptake and dissipation of thiamethoxam in an agricultural soil. **2020**, 390, 121749 26



456	Clanis bilineata larvae skin-derived biochars for immobilization of lead: Sorption isotherm and molecular mechanism. <b>2020</b> , 704, 135251	8
455	Impacts of biochar and silicate fertilizer on arsenic accumulation in rice ( <i>Oryza sativa</i> L.). <b>2020</b> , 189, 109928	12
454	Different effects of N-flow and air-limited pyrolysis on bamboo-derived biochars' nitrogen and phosphorus release and sorption characteristics. <b>2020</b> , 711, 134828	7
453	Biochar-assisted phytoextraction of Cd and Zn by <i>Noccaea caerulescens</i> on a contaminated soil: A four-year lysimeter study. <b>2020</b> , 707, 135654	8
452	Amending an As/Pb contaminated soil with biochar, compost and iron grit: effect on <i>Salix viminalis</i> growth, root proteome profiles and metal(loid) accumulation indexes. <b>2020</b> , 244, 125397	18
451	Pyrolysis-temperature depended electron donating and mediating mechanisms of biochar for Cr(VI) reduction. <b>2020</b> , 388, 121794	49
450	Spectroscopic and molecular characterization of biochar-derived dissolved organic matter and the associations with soil microbial responses. <b>2020</b> , 708, 134619	39
449	Mechanistic insights and multiple characterizations of cadmium binding to animal-derived biochar. <i>Environmental Pollution</i> , <b>2020</b> , 258, 113675	9-3 13
448	The effect of biochar on severity of soil water repellency of crude oil-contaminated soil. <b>2020</b> , 27, 6022-6032	7
447	The addition of biochar as a fertilizer supplement for the attenuation of potentially toxic elements in phosphogypsum-amended soil. <b>2020</b> , 277, 124052	7
446	Adsorption of Lead, manganese, and copper onto biochar in landfill leachate: implication of non-linear regression analysis. <b>2020</b> , 30,	11
445	Biochar and its importance on nutrient dynamics in soil and plant. <b>2020</b> , 2, 379-420	56
444	Characteristics and mechanisms of phosphorous adsorption by rape straw-derived biochar functionalized with calcium from eggshell. <b>2020</b> , 318, 124063	28
443	Biochar characteristics, applications and importance in health risk reduction through metal immobilization. <b>2020</b> , 20, 101121	8
442	Speciation, toxicity mechanism and remediation ways of heavy metals during composting: A novel theoretical microbial remediation method is proposed. <b>2020</b> , 272, 111109	28
441	Influences of feedstock sources and pyrolysis temperature on the properties of biochar and functionality as adsorbents: A meta-analysis. <b>2020</b> , 744, 140714	147
440	Synthesis of <i>Eichhornia crassipes</i> Biochar: Sustainable Efficient Adsorbent for Reducing Cr (VI) Metal Ion. <b>2020</b> , 1539, 012003	0
439	Use of <i>Brassica juncea</i> and <i>Dactylis glomerata</i> for the phytostabilization of mine soils amended with compost or biochar. <b>2020</b> , 260, 127661	25

438	Mitigating arsenic accumulation in rice ( <i>Oryza sativa</i> L.) using Fe-Mn-La-impregnated biochar composites in arsenic-contaminated paddy soil. <b>2020</b> , 27, 41446-41457	5
437	Biochar effect on crop performance and Pb and Zn uptake of tomato (L.) plants grown on heavy metals contaminated Kosovo soils. <b>2020</b> , 55, 844-853	1
436	Biochar derived from <i>Caulerpa scalpelliformis</i> for the removal of Reactive Yellow 81 in batch and packed bed column. <b>2020</b> , 1	1
435	Effects of Biochars Produced from Coconut Shell and Sewage Sludge on Reducing the Uptake of Cesium by Plant from Contaminated Soil. <b>2020</b> , 231, 1	2
434	Silver microsphere doping porous-carbon inspired shape-stable phase change material with excellent thermal properties: preparation, optimization, and mechanism. <b>2020</b> , 10, 20843	2
433	The quality of soil organic matter, accessed by C solid state nuclear magnetic resonance, is just as important as its content concerning pesticide sorption. <i>Environmental Pollution</i> , <b>2020</b> , 266, 115298	9.3 11
432	Biochar increases soil microbial biomass but has variable effects on microbial diversity: A meta-analysis. <b>2020</b> , 749, 141593	28
431	Sorption of Heavy Metals onto Biochar. <b>2020</b> ,	5
430	Ozone and Ammonium Hydroxide Modification of Biochar Prepared from <i>Pisum sativum</i> Peels Improves the Adsorption of Copper (II) from an Aqueous Medium. <b>2020</b> , 7, 973-1007	10
429	Biochar Affects Heavy Metal Uptake in Plants through Interactions in the Rhizosphere. <b>2020</b> , 10, 5105	9
428	Can biochar reclaim coal mine spoil?. <b>2020</b> , 272, 111097	19
427	Effectiveness, stabilization, and potential feasible analysis of a biochar material on simultaneous remediation and quality improvement of vanadium contaminated soil. <b>2020</b> , 277, 123506	14
426	Assessment of Zeolite, Biochar, and Their Combination for Stabilization of Multimetal-Contaminated Soil. <b>2020</b> , 5, 27374-27382	12
425	Addition of recyclable biochar, compost and fibre clay to the growth medium layer for the cover system of mine tailings: a bioassay in a greenhouse. <b>2020</b> , 79, 1	2
424	Oxytetracycline, copper, and zinc effects on nitrification processes and microbial activity in two soil types. <b>2020</b> , 9, e248	2
423	The effects of biochar and AM fungi ( <i>Funneliformis mosseae</i> ) on bioavailability Cd in a highly contaminated acid soil with different soil phosphorus supplies. <b>2020</b> , 27, 44440-44451	
422	Brewer's Spent Grains-Valuable Beer Industry By-Product. <b>2020</b> , 10,	25
421	. <b>2020</b> ,	1

420	The effect of brewery sludge biochar on immobilization of bio-available cadmium and growth of. <b>2020</b> , 6, e05573	0
419	Predicting Slow Pyrolysis Process Outcomes with Simplified Empirical Correlations for a Consistent Higher Heating Temperature: Biochar Yield and Ash Content. <b>2020</b> , 34, 14223-14231	1
418	Vermiremediation of Pharmaceutical-Contaminated Soils and Organic Amendments. <b>2020</b> , 339	2
417	Thermogravimetric investigation on co-combustion characteristics and kinetics of antibiotic filter residue and vegetal biomass. <b>2020</b> , 1	0
416	A comprehensive adsorption study of 1-Hydroxy-2-Naphthoic acid using cost effective engineered materials. <b>2020</b> , 19, 100881	1
415	Bioremediation and Biotechnology, Vol 2. <b>2020</b> ,	0
414	Evaluation of commercial biochar in South Korea for environmental application and carbon sequestration. <b>2020</b> , 39, e13440	2
413	Recent advances and challenges in biomass-derived porous carbon nanomaterials for supercapacitors. <b>2020</b> , 397, 125418	103
412	Nano-Fe(0)/mesoporous carbon supported on biochar for activating peroxydisulfate to remove polycyclic aromatics hydrocarbons. <b>2020</b> , 3, 307-313	2
411	The Potential Effectiveness of Biochar Application to Reduce Soil Cd Bioavailability and Encourage Oak Seedling Growth. <b>2020</b> , 10, 3410	11
410	Role of biochar and <i>Eisenia fetida</i> on metal bioavailability and biochar effects on earthworm fitness. <i>Environmental Pollution</i> , <b>2020</b> , 263, 114586	9.3 18
409	Factors influencing heavy metal availability and risk assessment of soils at typical metal mines in Eastern China. <b>2020</b> , 400, 123289	60
408	Understanding the role of biochar in mitigating soil water stress in simulated urban roadside soil. <b>2020</b> , 738, 139798	8
407	Wheat Straw Biochar as a Specific Sorbent of Cobalt in Soil. <b>2020</b> , 13,	9
406	Characteristics of denitrification genes and relevant enzyme activities in heavy-metal polluted soils remediated by biochar and compost. <b>2020</b> , 739, 139987	26
405	Biochar and Ash Fertilization Alter the Chemical Properties of Basket Willow ( <i>Salix viminalis</i> L.) and Giant Miscanthus ( <i>Miscanthus x giganteus</i> ). <b>2020</b> , 10, 660	0
404	Biochar-driven reduction of As(V) and Cr(VI): Effects of pyrolysis temperature and low-molecular-weight organic acids. <b>2020</b> , 201, 110873	18
403	The use of willow microcuttings for phytoremediation in a copper, zinc and lead contaminated field trial in Shanghai, China. <b>2020</b> , 22, 1331-1337	2

402	Phytoremediation. <b>2020</b> ,	11
401	Thallium contamination in agricultural soils and associated potential remediation via biochar utilization. <b>2020</b> , 2, 33-46	7
400	Effect of aluminum modification of rice strawBased biochar on arsenate adsorption. <b>2020</b> , 20, 3073-3082	12
399	Effect of the soil biochar aging on the sorption and desorption of Pb <sup>2+</sup> under competition of Zn <sup>2+</sup> in a sandy calcareous soil. <b>2020</b> , 79, 1	4
398	Restoration of soil quality using biochar and brown coal waste: A review. <b>2020</b> , 722, 137852	56
397	Effect of the Pyro-Gasification Temperature of Wood on the Physical and Mechanical Properties of Biochar-Polymer Biocomposites. <b>2020</b> , 13,	10
396	Biochar Improves the Growth Performance of Maize Seedling in Response to Antimony Stress. <b>2020</b> , 231, 1	3
395	Effect of walnut shell biochars on soil quality, crop yields, and weed dynamics in a 4-year field experiment. <b>2020</b> , 27, 18510-18520	3
394	Preliminary evaluation of a decision support tool for biochar amendment. <b>2020</b> , 2, 93-105	2
393	A magnetic macro-porous biochar sphere as vehicle for the activation and removal of heavy metals from contaminated agricultural soil. <b>2020</b> , 390, 124638	21
392	Effects of biochar properties on the bioremediation of the petroleum-contaminated soil from a shale-gas field. <b>2020</b> , 27, 36427-36438	4
391	Effects of biochar on methane emission from paddy soil: Focusing on DOM and microbial communities. <b>2020</b> , 743, 140725	15
390	Biochar in soil mitigates dimethoate hazard to soil pore water exposed biota. <b>2020</b> , 400, 123304	7
389	Sugarcane Bagasse Biochar: Preparation, Characterization, and Its Effects on Soil Properties and Zinc Sorption-desorption. <b>2020</b> , 51, 1391-1405	5
388	A review of recent developments in catalytic applications of biochar-based materials. <b>2020</b> , 162, 105036	42
387	Biochars evaluation for chromium pollution abatement in chromite mine wastewater and overburden of Sukinda, Odisha, India. <b>2020</b> , 13,	2
386	Formation of Char-Like, Fused-Ring Aromatic Structures from a Nonpyrogenic Pathway during Decomposition of Wheat Straw. <b>2020</b> , 68, 2607-2614	3
385	Effects of Six Types of Straw Derived Biochar on Anaerobic Biodegradation of Polybrominated Diphenyl Ethers in Mangrove Sediments: A Microcosm Experiment. <b>2020</b> , 435, 012003	4

384	Phytoremediation and Bioremediation of Pesticide-Contaminated Soil. <b>2020</b> , 10, 1217	24
383	Combined Effect of Ferrous Ion and Biochar on Cadmium and Arsenic Accumulation in Rice. <b>2020</b> , 10, 300	9
382	Effect of Fe-Mn-Ce modified biochar composite on microbial diversity and properties of arsenic-contaminated paddy soils. <b>2020</b> , 250, 126249	22
381	Chemical, physical and morphological properties of biochars produced from agricultural residues: Implications for their use as soil amendment. <b>2020</b> , 105, 256-267	46
380	Effect of calcium dihydrogen phosphate addition on carbon retention and stability of biochars derived from cellulose, hemicellulose, and lignin. <b>2020</b> , 251, 126335	10
379	Surface soil mixing is more beneficial than the plough layer mixing mode of biochar application for nitrogen retention in a paddy system. <b>2020</b> , 718, 137399	6
378	Simultaneous removal of arsenic, cadmium, and lead from soil by iron-modified magnetic biochar. <i>Environmental Pollution</i> , <b>2020</b> , 261, 114157	9.3 65
377	Sorption and molecular fractionation of biochar-derived dissolved organic matter on ferrihydrite. <b>2020</b> , 392, 122260	27
376	Applications of carbonaceous adsorbents in the remediation of polycyclic aromatic hydrocarbon-contaminated sediments: A review. <b>2020</b> , 255, 120263	34
375	Biochar from biomass waste as a renewable carbon material for climate change mitigation in reducing greenhouse gas emissions: A review. <b>2020</b> , 11, 2247	25
374	Goethite-modified biochar ameliorates the growth of rice ( <i>Oryza sativa</i> L.) plants by suppressing Cd and As-induced oxidative stress in Cd and As co-contaminated paddy soil. <b>2020</b> , 717, 137086	45
373	Stabilization of heavy metal-contaminated soils by biochar: Challenges and recommendations. <b>2020</b> , 729, 139060	94
372	Biochar Application Alleviated Negative Plant-Soil Feedback by Modifying Soil Microbiome. <b>2020</b> , 11, 799	17
371	Effects of EDDS on the Cd uptake and growth of <i>Tagetes patula</i> L. and <i>Phytolacca americana</i> L. in Cd-contaminated alkaline soil in northern China. <b>2020</b> , 27, 25248-25260	5
370	Nonlinear sorption of phosphorus onto plant biomass-derived biochars at different pyrolysis temperatures. <b>2020</b> , 19, 100808	11
369	Antibiotics and Antimicrobial Resistance Genes. <b>2020</b> ,	3
368	Biochar Applications in Agriculture and Environment Management. <b>2020</b> ,	4
367	Role of raw feedstock and biochar amendments on sorption-desorption and leaching potential of three <sup>3</sup> H- and <sup>14</sup> C-labelled pesticides in soils. <b>2020</b> , 324, 1373-1386	7

366	Remediation of Lead-Contaminated Water by Virgin Coniferous Wood Biochar Adsorbent: Batch and Column Application. <b>2020</b> , 231, 1	19
365	Wheat Straw Biochar and NPK Fertilization Efficiency in Sandy Soil Reclamation. <b>2020</b> , 10, 496	4
364	Ni(II) Adsorption on Biochars Produced from Different Types of Biomass. <b>2020</b> , 231, 1	3
363	Comparison of 17 $\beta$ -estradiol adsorption on soil organic components and soil remediation agent-biochar. <i>Environmental Pollution</i> , <b>2020</b> , 263, 114572	9-3 5
362	Preparation of high porosity biochar materials by template method: a review. <b>2020</b> , 27, 20675-20684	3
361	Insight into the mechanisms of biochar addition on pollutant removal enhancement and nitrous oxide emission reduction in subsurface flow constructed wetlands: Microbial community structure, functional genes and enzyme activity. <b>2020</b> , 307, 123249	25
360	Effect of biochar-derived dissolved organic matter on adsorption of sulfamethoxazole and chloramphenicol. <b>2020</b> , 396, 122598	39
359	Oxidative ageing of biochar and hydrochar alleviating competitive sorption of Cd(II) and Cu(II). <b>2020</b> , 725, 138419	28
358	Sorption of sulfamethoxazole on biochars of varying mineral content. <b>2020</b> , 22, 1287-1294	2
357	The use of biochar for sustainable treatment of contaminated soils. <b>2020</b> , 119-167	3
356	Influence of pyrolysis temperature and bio-waste composition on biochar characteristics. <b>2020</b> , 155, 837-847	39
355	Use and economic benefit of soft rock as an amendment for sandy soil in Mu Us Sandy Land, China. <b>2021</b> , 35, 15-31	1
354	Secondary enrichment of soil by alkaline emissions: The specific form of anthropo-geogenic soil degradation near magnesite processing factories and possibilities of land management. <b>2021</b> , 32, 881-895	0
353	The addition of biochar as a sustainable strategy for the remediation of PAH-contaminated sediments. <b>2021</b> , 263, 128274	31
352	Effects of biochars combined with ferrous sulfate and pig manure on the bioavailability of Cd and potential phytotoxicity for wheat in an alkaline contaminated soil. <b>2021</b> , 753, 141832	11
351	Biochars as media for air pollution control systems: Contaminant removal, applications and future research directions. <b>2021</b> , 753, 142249	30
350	Sorption-desorption and biodegradation of sulfometuron-methyl and its effects on the bacterial communities in Amazonian soils amended with aged biochar. <b>2021</b> , 207, 111222	7
349	Does biochar inhibit the bioavailability and bioaccumulation of As and Cd in co-contaminated soils? A meta-analysis. <b>2021</b> , 762, 143117	13

348	Impacts of bamboo biochar on the phytoremediation potential of grown in multi-metals contaminated soil. <b>2021</b> , 23, 387-399	11
347	Immobilization and mitigation of chromium toxicity in aqueous solutions and tannery waste-contaminated soil using biochar and polymer-modified biochar. <b>2021</b> , 266, 129198	23
346	Chemical stabilization of Cd-contaminated soil using fresh and aged wheat straw biochar. <b>2021</b> , 28, 10155-10166	66
345	Evaluating the environmental and economic impact of mining for post-mined land restoration and land-use: A review. <b>2021</b> , 279, 111623	28
344	Stabilization of PFAS-contaminated soil with activated biochar. <b>2021</b> , 763, 144034	17
343	Evaluation of ion content, productivity and essential oil quality of garlic under saline conditions and biochar and polyamine treatments. <b>2021</b> , 96, 103720	3
342	Short-Term Aging of Pod-Derived Biochar Reduces Soil Cadmium Mobility and Ameliorates Cadmium Toxicity to Soil Enzymes and Tomato. <b>2021</b> , 40, 3306-3316	2
341	Phytoremediation potential of <i>Miscanthus sinensis</i> And. in organochlorine pesticides contaminated soil amended by Tween 20 and Activated carbon. <b>2021</b> , 28, 16092-16106	7
340	Agrochemical leaching reduction in biochar-amended tropical soils of Belize. <b>2021</b> , 72, 1243-1255	2
339	Development of biomass-derived biochar for agronomic and environmental remediation applications. <b>2021</b> , 11, 339-361	8
338	Biochar: a sustainable solution. <b>2021</b> , 23, 6642-6680	28
337	Effects of three biochars on copper immobilization and soil microbial communities in a metal-contaminated soil using a metallophyte and two agricultural plants. <b>2021</b> , 43, 1441-1456	6
336	Effects of Fe-loaded biochar on the bioavailability of Arsenic and cadmium to lettuce growing in a mining contaminated soil. <b>2021</b> , 42, 2145-2153	1
335	Conversion of food waste into biofuel and biocarbon. <b>2021</b> , 383-449	
334	Current heterogeneous catalytic processes for environmental remediation of air, water, and soil. <b>2021</b> , 443-498	
333	BioremediationThe natural solution. <b>2021</b> , 11-40	1
332	Biodecolorization of Reactive Red 120 in batch and packed bed column using biochar derived from <i>Ulva reticulata</i> . 1	10
331	Adsorption of Organic Compounds by Biomass Chars: Direct Role of Aromatic Condensation (Ring Cluster Size) Revealed by Experimental and Theoretical Studies. <b>2021</b> , 55, 1594-1603	10

330	Woody biochar potential for abandoned mine land restoration in the U.S.: a review. <b>2021</b> , 3, 7-22	9
329	Determining the characteristics and potential of plantbased biochars to reduce copper uptake in maize. 80,	1
328	Immobilization and assessment of heavy metals in chicken manure compost amended with rice straw-derived biochar. <b>2021</b> , 33, 1-10	3
327	Biochar from Biomass: A Strategy for Carbon Dioxide Sequestration, Soil Amendment, Power Generation, CO2 Utilization, and Removal of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) in the Environment. <b>2021</b> , 1-64	
326	Remediation of Cadmium-Contaminated Soil Using Biochar Derived from Wheat Straw, Rice Husk and Bagasse. <b>2021</b> , 117-126	
325	Characterization of Bael Shell (Aegle marmelos) Pyrolytic Biochar. <b>2021</b> , 747-760	
324	Influence of the harvest time and the airflow rate on the characteristics of the Arundo biochar produced in a pilot updraft reactor. 1	2
323	Water retention characteristics of substrates containing biochar and compost as peat and perlite replacements for ornamental plant production. <b>2021</b> , 507-512	1
322	Changes in soil carbon and nitrogen accessibility with the application of biochars with different morphological and physical characteristics. <b>2021</b> , 21, 1644-1658	0
321	Diffusive Gradient in thin film technique as tool for assessment of metal availability and kinetics of resupply in remediated soils. <b>2021</b> , 12, 100493	1
320	Remediation of mercury-contaminated soils and sediments using biochar: a critical review. <b>2021</b> , 3, 23-35	4
319	Microbiological Indicators of Heavy Metals and Carbon-Containing Preparations Applied to Agrosoddy-Podzolic Soils Differing in Humus Content. <b>2021</b> , 54, 448-458	6
318	Impact of biochar and lignite-based amendments on microbial communities and greenhouse gas emissions from agricultural soil. <b>2021</b> , 20, e20105	1
317	Influence of biochar on trace element uptake, toxicity and detoxification in plants and associated health risks: A critical review. 1-41	23
316	Comparative adsorptive removal of Reactive Red 120 using RSM and ANFIS models in batch and packed bed column. 1	7
315	Invasive annual grass interacts with drought to influence plant communities and soil moisture in dryland restoration. <b>2021</b> , 12, e03417	2
314	Energy Harvesting/Storage and Environmental Remediation via Hot Drinks Wastes. <b>2021</b> , 21, 1098-1118	2
313	Sorption of benzo[a]pyrene by Chernozem and carbonaceous sorbents: comparison of kinetics and interaction mechanisms. <b>2021</b> , 1	3



312	Microbial response to designer biochar and compost treatments for mining impacted soils.. <b>2021</b> , 3, 299-314	2
311	Changes in soil water retention following biochar amendment. 1-9	1
310	Assessment of the pyrolysis products from halophyte <i>Salicornia bigelovii</i> cultivated in a desert environment. <b>2021</b> , 290, 119518	3
309	Production of <i>Ulva prolifera</i> derived biochar and evaluation of adsorptive removal of Reactive Red 120: batch, isotherm, kinetic, thermodynamic and regeneration studies. 1	6
308	Combined use of lime, bentonite, and biochar for immobilization of Cd and mobilization of Se in paddy soil. <b>2021</b> , 28, 45050-45063	3
307	An overview of effect of process parameters for removal of CO <sub>2</sub> using biomass-derived adsorbents. 1	3
306	Occurrence, formation and environmental fate of polycyclic aromatic hydrocarbons in biochars. <b>2021</b> , 1, 296-305	6
305	Impact of Biochar on Soil Properties, Pore Water Properties, and Available Cadmium. <b>2021</b> , 107, 544-552	0
304	Recent advances in biochar engineering for soil contaminated with complex chemical mixtures: Remediation strategies and future perspectives. <b>2021</b> , 767, 144351	30
303	Engineered biochars from catalytic microwave pyrolysis for reducing heavy metals phytotoxicity and increasing plant growth. <b>2021</b> , 271, 129808	15
302	Assessing the diverse environmental effects of biochar systems: An evaluation framework. <b>2021</b> , 286, 112154	7
301	Biochar application modified growth and physiological parameters of <i>Ocimum ciliatum</i> L. and reduced human risk assessment under cadmium stress. <b>2021</b> , 409, 124954	11
300	Effect of wheat straw derived biochar on the bioavailability of Pb, Cd and Cr using maize as test crop. <b>2021</b> , 25, 101232	4
299	Co-pyrolysis of agricultural and industrial wastes changes the composition and stability of biochars and can improve their agricultural and environmental benefits. <b>2021</b> , 155, 105036	9
298	Effects of biochar amendment and reduced irrigation on growth, physiology, water-use efficiency and nutrients uptake of tobacco ( <i>Nicotiana tabacum</i> L.) on two different soil types. <b>2021</b> , 770, 144769	15
297	Arsenic immobilization and removal in contaminated soil using zero-valent iron or magnetic biochar amendment followed by dry magnetic separation. <b>2021</b> , 768, 144521	15
296	Optimization of process conditions using RSM and ANFIS for the removal of Remazol Brilliant Orange 3R in a packed bed column. <b>2021</b> , 98, 100086	4
295	Biochar Improves Root Growth of <i>Sapium sebiferum</i> (L.) Roxb. Container Seedlings. <b>2021</b> , 11, 1242	0

294	Insights into thallium adsorption onto the soil, bamboo-derived biochar, and biochar amended soil in Pomelo orchard. <b>2021</b> , 3, 315-328	1
293	Engineered algal biochar for contaminant remediation and electrochemical applications. <b>2021</b> , 774, 145676	44
292	Amending mine tailing cover with compost and biochar: effects on vegetation establishment and metal bioaccumulation in the Finnish subarctic. <b>2021</b> , 28, 59881-59898	2
291	Synergistic effects of biochar and biostimulants on nutrient and toxic element uptake by pepper in contaminated soils. <b>2022</b> , 102, 167-174	0
290	Phytotoxicity of Heavy Metals in Contaminated Podzolic Soils of Different Fertility Levels. <b>2021</b> , 54, 964-974	3
289	Cadmium transport in red paddy soils amended with wheat straw biochar. <b>2021</b> , 193, 381	1
288	Use of Organic Amendments in Phytoremediation of Metal-Contaminated Soils: Prospects and Challenges. <b>2021</b> , 205-233	0
287	Effect of biochar amendment on mobility and plant uptake of Zn, Pb and Cd in contaminated soil. <b>2021</b> , 779, 012082	1
286	The Monitoring of Selected Heavy Metals Content and Bioavailability in the Soil-Plant System and Its Impact on Sustainability in Agribusiness Food Chains. <b>2021</b> , 13, 7021	2
285	Effects of Biochar Produced from Cornstalk, Rice Husk and Bamboo on Degradation of Flumioxazin in Soil. 1-15	1
284	From landfills to landscapes-Nature-based solutions for water management taking into account legacy contamination. <b>2021</b> ,	3
283	Fourier Transform Infrared Spectroscopy vibrational bands study of <i>Spinacia oleracea</i> and <i>Trigonella corniculata</i> under biochar amendment in naturally contaminated soil. <b>2021</b> , 16, e0253390	6
282	Biochar for Bioremediation of Toxic Metals. <b>2021</b> , 119-130	
281	Biochar Assisted Remediation of Toxic Metals and Metalloids. <b>2021</b> , 131-162	1
280	Biochar Production, Properties, and Service to Environmental Protection against Toxic Metals. <b>2021</b> , 53-75	2
279	A mechanistic study on removal efficiency of four antibiotics by animal and plant origin precursors-derived biochars. <b>2021</b> , 772, 145468	19
278	Evaluation of factors affecting arsenic uptake by <i>Brassica juncea</i> in alkali soil after biochar application using partial least squares path modeling (PLS-PM). <b>2021</b> , 275, 130095	6
277	Effects of biochar on the growth of <i>Vallisneria natans</i> in surface flow constructed wetland. <b>2021</b> , 28, 66158-66170	2

276	Biochar produced from wood waste for soil remediation in Sweden: Carbon sequestration and other environmental impacts. <b>2021</b> , 776, 145953	14
275	Changes in the Structures and Directions of Heavy Metal-Contaminated Soil Remediation Research from 1999 to 2020: A Bibliometric & Scientometric Study. <b>2021</b> , 18,	3
274	Reactive oxygen species formation in thiols solution mediated by pyrogenic carbon under aerobic conditions. <b>2021</b> , 415, 125726	1
273	Combined Strategies to Prompt the Biological Reduction of Chlorinated Aliphatic Hydrocarbons: New Sustainable Options for Bioremediation Application. <b>2021</b> , 8,	5
272	Circular economy-driven ammonium recovery from municipal wastewater: State of the art, challenges and solutions forward. <b>2021</b> , 334, 125231	10
271	Post-processing of biochars to enhance plant growth responses: a review and meta-analysis. <b>2021</b> , 3, 437-455	3
270	Biochar and urban solid refuse ameliorate the inhospitality of acidic mine tailings and foster effective spontaneous plant colonization under semiarid climate. <b>2021</b> , 292, 112824	1
269	How agricultural management practices affect nitrogen transportation and redistribution under the drying-rewetting process of loessial sloping lands?. <b>2021</b> , 315, 107440	1
268	Sustainable synthesis of rose flower-like magnetic biochar from tea waste for environmental applications.. <b>2021</b> , 34, 13-27	8
267	Low temperature production of biochars from different biomasses: Effect of static and rotary lab reactors and application as soil conditioners. <b>2021</b> , 9, 105472	2
266	Continuous Sorption of Remazol Brilliant Orange 3R Using <i>Caulerpa scalpelliformis</i> Biochar. <b>2021</b> , 2021, 1-7	1
265	Effectiveness of biochar application and bioaugmentation techniques for the remediation of freshly and aged diesel-polluted soils. <b>2021</b> , 163, 105259	1
264	Characterization of halophyte biochar and its effects on water and salt contents in saline soil. <b>2021</b> , 1	0
263	Agricultural Waste-Based Biochar for Agronomic Applications. <b>2021</b> , 11, 8914	3
262	Bioremediation strategies with biochar for polychlorinated biphenyls (PCBs)-contaminated soils: A review. <b>2021</b> , 200, 111757	9
261	Can biochar be an effective and reliable biostimulating agent for the remediation of hydrocarbon-contaminated soils?. <b>2021</b> , 154, 106553	5
260	Deciphering the transformation mechanism of substituted polycyclic aromatic hydrocarbons on Al(III)-montmorillonite: An experimental and density functional theory study. <b>2021</b> , 786, 147493	2
259	Effect of calcium and iron-enriched biochar on arsenic and cadmium accumulation from soil to rice paddy tissues. <b>2021</b> , 785, 147163	17

258	Biochar potential to relegate metal toxicity effects is more soil driven than plant system: A global meta-analysis. <b>2021</b> , 316, 128276		13
257	Enrichment of potential degrading bacteria accelerates removal of tetracyclines and their epimers from cow manure biochar amended soil. <b>2021</b> , 278, 130358		9
256	Enhanced nitrogen removal in an electrochemically coupled biochar-amended constructed wetland microcosms: The interactive effects of biochar and electrochemistry. <b>2021</b> , 789, 147761		9
255	Nickel in soil and water: Sources, biogeochemistry, and remediation using biochar. <b>2021</b> , 419, 126421		8
254	(Im)mobilization of arsenic, chromium, and nickel in soils via biochar: A meta-analysis. <i>Environmental Pollution</i> , <b>2021</b> , 286, 117199	9.3	12
253	Effects of biochar derived from sewage sludge and sewage sludge/cotton stalks on the immobilization and phytoavailability of Pb, Cu, and Zn in sandy loam soil. <b>2021</b> , 419, 126468		5
252	A comprehensive evaluation of inherent properties and applications of nano-biochar prepared from different methods and feedstocks. <b>2021</b> , 320, 128759		7
251	Review on upgrading organic waste to value-added carbon materials for energy and environmental applications. <b>2021</b> , 296, 113128		13
250	Competitive adsorption of Dibutyl phthalate (DBP) and Di(2-ethylhexyl) phthalate (DEHP) onto fresh and oxidized corncob biochar. <b>2021</b> , 280, 130639		4
249	Co-pyrolysis of corn stover with industrial coal ash for in situ efficient remediation of heavy metals in multi-polluted soil. <i>Environmental Pollution</i> , <b>2021</b> , 289, 117840	9.3	2
248	A review of pesticides sorption in biochar from maize, rice, and wheat residues: Current status and challenges for soil application. <b>2021</b> , 300, 113753		8
247	The role of biochar in alleviating soil drought stress in urban roadside greenery. <b>2021</b> , 404, 115223		4
246	Biochar-induced reduction of NO emission from East Asian soils under aerobic conditions: Review and data analysis. <i>Environmental Pollution</i> , <b>2021</b> , 291, 118154	9.3	2
245	Assessment of compost and three biochars associated with <i>Ailanthus altissima</i> (Miller) Swingle for lead and arsenic stabilization in a post-mining Technosol. <b>2021</b> , 31, 944-953		2
244	Biochar ageing in polluted soils and trace elements immobilisation in a 2-year field experiment. <i>Environmental Pollution</i> , <b>2021</b> , 290, 118025	9.3	4
243	Roles of soluble minerals in Cd sorption onto rice straw biochar.. <b>2022</b> , 113, 64-71		3
242	Biochar as environmental armour and its diverse role towards protecting soil, water and air. <b>2022</b> , 806, 150444		12
241	Soft computing-based models and decolorization of Reactive Yellow 81 using <i>Ulva Prolifera</i> biochar. <b>2022</b> , 287, 132368		4

240	Recent Advance on Torrefaction Valorization and Application of Biochar from Agricultural Waste for Soil Remediation. <b>2022</b> , 10, 247-261	0
239	Dozens-fold improvement of biochar redox properties by KOH activation. <b>2022</b> , 429, 132203	2
238	Biochar reduced extractable dieldrin concentrations and promoted oligotrophic growth including microbial degraders of chlorinated pollutants. <b>2022</b> , 423, 127156	1
237	Comparative study on polychlorinated biphenyl sorption to activated carbon and biochar and the influence of natural organic matter. <b>2022</b> , 287, 132239	0
236	Rhizosphere Engineering. <b>2021</b> , 91-117	
235	Enhanced Benzo[fluoranthrene] Removal in Surface Flow Constructed Wetlands with the Addition of Carbon. <b>2021</b> , 6, 2865-2872	0
234	Assessing the Ecotoxicity of Soil Affected by Wildfire. <b>2021</b> , 8, 3	2
233	Effects of amendments on the bioavailability, transformation and accumulation of heavy metals by pakchoi cabbage in a multi-element contaminated soil.. <b>2021</b> , 11, 4395-4405	5
232	Optimization of Adsorption Conditions and Properties of Biomass Carbon of Eihhornia crassipes to Phosphorus. <b>2021</b> , 09, 29-35	
231	Biochar-assisted Fenton-like oxidation of benzo[a]pyrene-contaminated soil. <b>2021</b> , 1	3
230	Effects of brewer's spent grain biochar on the growth and quality of leaf lettuce ( <i>Lactuca sativa</i> L. var. <i>crispa</i> ). <b>2021</b> , 64,	5
229	Biochar from Biomass: A Strategy for Carbon Dioxide Sequestration, Soil Amendment, Power Generation, and CO <sub>2</sub> Utilization. <b>2015</b> , 1-31	3
228	Global Environmental Regulations for Management of Pesticides. <b>2020</b> , 259-270	1
227	Treatment Technologies for Removal of Antibiotics, Antibiotic Resistance Bacteria and Antibiotic-Resistant Genes. <b>2020</b> , 415-434	2
226	Utilization Alternatives of Algal Wastes for Solid Algal Products. <b>2015</b> , 393-418	8
225	Biochar Facilitated Hydroxyapatite/Calcium Silicate Hydrate for Remediation of Heavy Metals Contaminated Soils. <b>2020</b> , 231, 1	17
224	Enhanced wheat yield by biochar addition under different mineral fertilization levels. <b>2013</b> , 33, 475	1
223	Biochars for the removal of naphthenic acids from water: A prospective approach towards remediation of petroleum refinery wastewater. <b>2020</b> , 266, 121986	19

222	Impact of biochar amendment on the uptake, fate and bioavailability of pharmaceuticals in soil-radish systems. <b>2020</b> , 398, 122852	13
221	Soil. <b>2014</b> , 75-96	3
220	Biochar in co-contaminated soil manipulates arsenic solubility and microbiological community structure, and promotes organochlorine degradation. <b>2015</b> , 10, e0125393	31
219	Application of Rice-Straw Biochar and Microorganisms in Nonylphenol Remediation: Adsorption-Biodegradation Coupling Relationship and Mechanism. <b>2015</b> , 10, e0137467	18
218	Karrikins Identified in Biochars Indicate Post-Fire Chemical Cues Can Influence Community Diversity and Plant Development. <b>2016</b> , 11, e0161234	32
217	Activated carbon, a useful medium to bind chlordecone in soil and limit its transfer to growing goat kids. <b>2017</b> , 12, e0179548	7
216	Characterisation of Biochar From Water Hyacinth Eichhornia crassipes and the Effects of Biochar on the Growth of Fish and Paddy in Integrated Culture Systems. <b>2019</b> , 86, 225	3
215	Soil Physical-Hydrological Degradation in the Root-Zone of Tree Crops: Problems and Solutions. <b>2021</b> , 11, 68	5
214	Purification of Forest Clear-Cut Runoff Water Using Biochar: A Meso-Scale Laboratory Column Experiment. <b>2020</b> , 12, 478	5
213	Amending inorganic fertilizers with rice straw compost to improve soil nutrients availability, nutrients uptake, and dry matter production of maize (Zea mays L.) cultivated on a tropical acid soil. <b>2019</b> , 4, 1020-1033	1
212	A review and future directions on enhancing sustainability benefits across food-energy-water systems: the potential role of biochar-derived products. <b>2019</b> , 6, 379-416	8
211	Stabilisation of Pb in Pb Smelting Slag-Contaminated Soil by Compost-Modified Biochars and Their Effects on Maize Plant Growth. <b>2015</b> , 06, 771-780	13
210	Biochar in Nutrient Recycling The Effect and Its Use in Wastewater Treatment. <b>2015</b> , 05, 39-44	17
209	Physical and chemical characterizations of biochars derived from different agricultural residues.	6
208	Review of Biochar Properties and Remediation of Metal Pollution of Water and Soil. <b>2020</b> , 10, 200902	19
207	Effectiveness of Biochar Obtained from Corn cob for Immobilization of Lead in Contaminated Soil. <b>2019</b> , 9, 190907	5
206	The effect of biochar amendments on phenanthrene sorption, desorption and mineralisation in different soils. <b>2018</b> , 6, e5074	4
205	Potential of rice straw biochar, sulfur and ryegrass ( L.) in remediating soil contaminated with nickel through irrigation with untreated wastewater. <b>2020</b> , 8, e9267	14

- 204 Mitigating Cadmium (Cd) Toxicity in Montane Forest Soils Using Biochar: Laboratory Trial for Soils from Horton Plains, Sri Lanka. **2021**, 11, 504-520
- 203 Biochar as a Soil Ameliorant: How Biochar Properties Benefit Soil Fertility? A Review. **2021**, 09, 28-46 3
- 202 Insights into the removal of Cd and Pb from aqueous solutions by NaOH/H<sub>2</sub>O<sub>2</sub>-modified biochar. **2021**, 24, 102031 1
- 201 Goethite modified biochar simultaneously mitigates the arsenic and cadmium accumulation in paddy rice (*Oryza sativa*) L. **2021**, 206, 112238 2
- 200 Biochar as a Soil Amendment: Reduction in Mercury Transport from Hydraulic Mine Debris. **2021**, 14, 6468
- 199 Nitrogen Recovery from Clear-Cut Forest Runoff Using Biochar: Adsorption/Desorption Dynamics Affected by Water Nitrogen Concentration. **2021**, 232, 1 0
- 198 Biochar: A Game Changer for Sustainable Agriculture. **2022**, 143-157 2
- 197 Acidified Biochar Confers Improvement in Quality and Yield Attributes of Sufaid Chaunsa Mango in Saline Soil. **2021**, 7, 418 0
- 196 Chemical Characterization of Mine Sites. **2017**, 17-32 0
- 195 Production of Tomato Stalk Biochar and its Usage in Hydroponic Agriculture. **2017**, 4, 15-22
- 194 Application of Novel Biochars from Maize Straw Mixed with Fermentation Wastewater for Soil Health. **2018**, 25-43
- 193 Remediation of Soil Contaminated with Heavy Metals by Using Nanomaterials. **2018**, 08, 127-136
- 192 Transformation and Stabilization of Lead and Chromium Using *Aspergillus* sp. and Bio-charcoal Amendment. **2018**, In Press,
- 191 Amending inorganic fertilizers with rice straw compost to improve soil nutrients availability, nutrients uptake, and dry matter production of maize (*Zea mays* L.) cultivated on a tropical acid soil. **2019**, 4, 1020-1033 1
- 190 Production, Characterization and Observation of Higher Carbon in *Sargassum wightii* Biochar From Indian Coastal Waters. **2019**, 86, 193
- 189 Potential of Biochar for the Remediation of Heavy Metal Contaminated Soil. **2020**, 77-98 1
- 188 Characterization of Novel Torrefied Biomass and Biochar Amendments. **2020**, 11, 157-177
- 187 Potential management practices of saltwater intrusion impacts on soil health and water quality: a review. **2021**, 12, 1327-1343 0

186	Effect of Biochar on the Degradation Dynamics of Chlorantraniliprole and Acetochlor in L. and Soil under Field Conditions. <b>2021</b> , 6, 217-226	2
185	The Influence of Biochar and Substrates Application on the Parameters and Yield of Mini-Tubers of the Charoit Potato Variety. <b>2021</b> , 37, 00036	
184	Phytoremediation of Metals by Aquatic Macrophytes. <b>2020</b> , 153-204	4
183	Biochar: A Sustainable Product for Remediation of Contaminated Soils. <b>2020</b> , 787-799	0
182	Soil Management and Restoration. <b>2020</b> , 145-167	1
181	Biochar-Based Adsorbents for the Removal of Organic Pollutants from Aqueous Systems. <b>2020</b> , 147-174	
180	Value Added Products from Agriculture, Paper and Food Waste: A Source of Bioenergy Production. <b>2021</b> , 91-126	1
179	Cattle manure compost and biochar supplementation improve growth of <i>Onobrychis viciifolia</i> in coal-mined spoils under water stress conditions. <b>2021</b> , 112440	1
178	Base cation-enhancing role of corn straw biochar in an acidic soil.	0
177	Effect of Biochar and PGPR on the Growth and Nutrients Content of Einkorn Wheat ( <i>Triticum monococcum</i> L.) and Post-Harvest Soil Properties. <b>2021</b> , 11, 2418	1
176	Systematic Review of Dairy Processing Sludge and Secondary STRUBIAS Products Used in Agriculture. <b>2021</b> , 5,	1
175	HCH Removal in a Biochar-Amended Biofilter. <b>2021</b> , 13, 3396	1
174	Effects of modified biochar on As-contaminated water and soil: A recent update. <b>2021</b> , 7, 107-136	0
173	Application of Biochar for Soil Remediation. <b>2021</b> , 403-425	
172	Application of Biochar for Soil Remediation. <b>2021</b> , 455-471	
171	Biochar for modification of manure properties. <b>2021</b> , 137-174	
170	Coupled Adsorption and Biodegradation of Trichloroethylene on Biochar from Pine Wood Wastes: A Combined Approach for a Sustainable Bioremediation Strategy.. <b>2022</b> , 10,	2
169	Nanobiochar-rhizosphere interactions: Implications for the remediation of heavy-metal contaminated soils.. <i>Environmental Pollution</i> , <b>2022</b> , 299, 118810	9.3 4



- 168 Plant- and microbe-assisted biochar amendment technology for petroleum hydrocarbon remediation in saline-sodic soils: A review. **2022**, 32, 211-221 2
- 167 An overview on biochar production, its implications, and mechanisms of biochar-induced amelioration of soil and plant characteristics. **2022**, 32, 107-130 13
- 166 Elucidating the Impact of Goethite-Modified Biochar on Arsenic Mobility, Bioaccumulation in Paddy Rice (*Oryza Sativa* L.) Along with Soil Enzyme Activities. 1
- 165 Biochar mitigation of allelopathic effects in three invasive plants: evidence from seed germination trials. 1
- 164 Degradation Process of Herbicides in Biochar-Amended Soils: Impact on Persistence and Remediation.
- 163 Investigation on the potential of eco-friendly bio-char for amendment in serpentine soils and immobilization of heavy metals contaminants: a review. 1 0
- 162 Biochar Produced from Organic Waste Digestate and Its Potential Utilization for Soil Remediation: An Overview. **2022**, 263-292 0
- 161 Abiotic reduction of 3-nitro-1,2,4-triazol-5-one (NTO) and other munitions constituents by wood-derived biochar through its rechargeable electron storage capacity.. **2022**, 0
- 160 Sustainable production and applications of biochar in circular bioeconomy. **2022**, 337-361
- 159 Evaluating Slow Pyrolysis of Biochar: Perspectives to Acidic Soil Amelioration and Growth of Selected Wheat () Varieties.. **2022**, 2022, 8181742 1
- 158 Rice straw biochar in combination with farmyard manure mitigates bromoxynil toxicity in wheat (*Triticum aestivum* L.).. **2022**, 295, 133854
- 157 Impact of Co-Hydrothermal carbonization of animal and agricultural waste on hydrochars: soil amendment and solid fuel properties. **2022**, 157, 106329 0
- 156 Effect of modified bentonite on copper migration via bank soils in the Jialing River, Southwest China. **2022**, 218, 105322 0
- 155 Industrial byproducts for the soil stabilization of trace elements and per- and polyfluorinated alkyl substances (PFASs).. **2022**, 153188 1
- 154 Poultry Litter Biochar as a Gentle Soil Amendment in Multi-Contaminated Soil: Quality Evaluation on Nutrient Preservation and Contaminant Immobilization. **2022**, 12, 405 2
- 153 Inherent Minerals Facilitated Bisphenol A Sorption by Biochar: A Key Force by Complexation. **2022**, 2, 184-194 0
- 152 Environment Persistent Free Radicals: Long-Lived Particles. **2021**, 1-19
- 151 Biochar from *Caryocar brasiliense* as a soil conditioner for common bean plants. **2022**, 52,

- 150 Cadmium and lead adsorption and desorption by coffee waste-derived biochars. 81, 0
- 149 Biochar, slag and ferrous manganese ore affect lead, cadmium and antioxidant enzymes in water spinach (*Ipomoea aquatica*) grown in multi-metal contaminated soil. **2022**, 1
- 148 Biochar Production from Co-Pyrolysis of Coffee Ground and Native Microalgae Consortium.
- 147 Softwood Biochar and *Eisenia Fetida* (Savigny) Earthworms Promote Sorghum Bicolor Growth and the Immobilization of Potentially Toxic Elements in Contaminated Soils.
- 146 Application of Biochar for the Restoration of Metal(loid)s Contaminated Soils. **2022**, 12, 1918
- 145 Biochar affects methylmercury production and bioaccumulation in paddy soils: Insights from soil-derived dissolved organic matter. **2022**, 2
- 144 Magnetically Recyclable Loofah Biochar by KMnO Modification for Adsorption of Cu(II) from Aqueous Solutions.. **2022**, 7, 8844-8853 1
- 143 Chemical transformation and bioavailability of chromium in the contaminated soil amended with bioamendments. 1-22 1
- 142 Nitrogen Assessment in Amended Mining Soils Sown with *Coronilla juncea* and *Piptatherum miliaceum*. **2022**, 12, 433 0
- 141 A Review on the Use of Biochar Derived Carbon Quantum Dots Production for Sensing Applications. **2022**, 10, 117 2
- 140 Biochar, compost, iron oxide, manure, and inorganic fertilizer affect bioavailability of arsenic and improve soil quality of an abandoned arsenic-contaminated gold mine spoil.. **2022**, 234, 113358 2
- 139 Biomass-derived biochar: From production to application in removing heavy metal-contaminated water. **2022**, 160, 704-733 8
- 138 Zirconium-modified biochar as the efficient adsorbent for low-concentration phosphate: performance and mechanism.. **2022**, 1 0
- 137 Elucidating the impact of goethite-modified biochar on arsenic mobility, bioaccumulation in paddy rice (*Oryza sativa* L.) along with soil enzyme activities. **2022**, 160, 958-967 1
- 136 Biochar as a potential strategy for remediation of contaminated mining soils: Mechanisms, applications, and future perspectives.. **2022**, 313, 114973 2
- 135 Greenhouse Gas Emissions according to Application of Biochar by Soil Type in the Closed Chamber. **2021**, 54, 451-466
- 134 Animal carcass burial management: implications for sustainable biochar use.. **2021**, 64, 91
- 133 Effects of the increases in soil pH and pH buffering capacity induced by crop residue biochars on available Cd contents in acidic paddy soils.. **2022**, 134674 0

132 Table\_1.DOCX. **2020**,

131 Table\_2.DOCX. **2020**,

130 Table\_3.DOCX. **2020**,

129 Table\_4.DOCX. **2020**,

128 Table\_5.DOCX. **2020**,

127 Table\_6.DOCX. **2020**,

126 Application of Biochar from Waste for Carbon Dioxide Sequestration and Sustainable Agriculture. **2022**, 113-126

125 The Role of Biochar Systems in the Circular Economy: Biomass Waste Valorization and Soil Remediation.

124 Enhancing network complexity and function of soil bacteria by thiourea-modified biochar under cadmium stress in post-mining area.. **2022**, 302, 134811

123 Recyclable Porous Adsorbents as Environmentally Approach for Greenhouse Gas Capture. **2022**, 503-531

122 Application of Invasive Plants as Biochar Precursors in the Field of Environment and Energy Storage. **2022**, 10,

121 Copyrolysis of Recycled Plastics and Biomass Reduces Biochar Bioavailable Silicon Production and Cadmium Phytotoxicity.

120 Hardwood modified and unmodified biochar amendments used for saline alkali soil remediation: phosphorus availability and its plant uptake. **2022**, 15, 1

119 Utilization of biochar prepared by invasive plant species Alternanthera philoxeroides to remove phenanthrene co-contaminated with PCE from aqueous solutions. 1

118 Kinetics of micronutrients and S adsorption onto phyto-biochars: influence of pyrolysis temperatures and properties of phyto-biochars. 1

117 Variation of microbial activities and communities in petroleum-contaminated soils induced by the addition of organic materials and bacterivorous nematodes.. **2022**, 237, 113559

116 Biochar decreases Cd mobility and rice (Oryza sativa L.) uptake by affecting soil iron and sulfur cycling.. **2022**, 155547

115 Organic amendments improved soil quality and reduced ecological risks of heavy metals in a long-term tea plantation field trial on an Alfisol.. **2022**, 156017

114 Biochar and its potential to increase water, trace element, and nutrient retention in soils. **2022**, 25-33

113 Biochars potential role in the remediation, revegetation, and restoration of contaminated soils. **2022**, 381-399

112 Removal of Reactive Red 120 in a Batch Technique Using Seaweed-Based Biochar: A Response Surface Methodology Approach. **2022**, 2022, 1-12

O

111 Biochar from Biomass: A Strategy for Carbon Dioxide Sequestration, Soil Amendment, Power Generation, CO<sub>2</sub> Utilization, and Removal of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) in the Environment. **2022**, 1023-1085

O

110 Biochar from microalgae. **2022**, 613-637

109 Biochar Impregnated Nanomaterials for Environmental Cleanup. **2022**, 331-345

108 Impact of Hydrochar Amendment on the Water Retention Capability of Agricultural Soil. **2022**,

107 The Phytomanagement of PFAS-Contaminated Land. **2022**, 19, 6817

O

106 Microbial interaction of biochar and its application in soil, water and air. **2022**, 185-203

105 Chapter 4. Nanotechnology for the Remediation of Plastic Wastes. **2022**, 117-143

104 Biochar production from co-pyrolysis of coffee ground and native microalgae consortium.

103 The Effect of Soil Amendments on Trace Elements Bioavailability and Toxicity to Earthworms in Contaminated Soils. **2022**, 12, 6280

1

102 Contrasting mobility of arsenic and copper in a mining soil: A comparative column leaching and pot testing approach. **2022**, 318, 115530

O

101 Metolachlor adsorption using walnut shell biochar modified by soil minerals. *Environmental Pollution*, **2022**, 308, 119610

9.3

O

100 Biochar application strategies for polycyclic aromatic hydrocarbons removal from soils. **2022**, 213, 113599

1

99 Enhancing the Productivity and Water Productivity of Lemon Using Partial Root Drying and Adding Biochar. **2022**, 21, 507-519

98 Remediation of Soil Impacted by Heavy Metal Using Farm Yard Manure, Vermicompost, Biochar and Poultry Manure.

97 Mobility and crop uptake of Zn in a legacy sludge-enriched agricultural soil amended with biochar or compost: insights from a pot and recirculating column leaching test.

O

- 96 Biochar Promotes the Germination and Growth of Herbaceous Seeds Hydroseeded on Gold Mine Tailings. **2022**, 16,
- 95 Use of Typical Wastes as Biochars in Removing Diethyl Phthalate (Det) from Water. **2022**, 10, 1369
- 94 Biochar, Ochre, and Manure Maturation in an Acidic Technosol Helps Stabilize As and Pb in Soil and Allows Its Vegetation by Salix triandra. **2022**, 9, 87
- 93 Carbothermal reduction synthesis of eggshell-biochar modified with nanoscale zerovalent iron/activated carbon for remediation of soil polluted with lead and cadmium. **2022**, 100726
- 92 Zero valent iron or Fe<sub>3</sub>O<sub>4</sub>-loaded biochar for remediation of Pb contaminated sandy soil: Sequential extraction, magnetic separation, XAFS and ryegrass growth. *Environmental Pollution*, **2022**, 308, 119702 9.3 0
- 91 The interactions of Cr (VI) concentrations and amendments (biochar and manure) on growth and metal accumulation of two species of Salicornia in contaminated soil.
- 90 Application of dry olive residue-based biochar in combination with arbuscular mycorrhizal fungi enhances the microbial status of metal contaminated soils. **2022**, 12, 1
- 89 Sustainable approach to manage solid waste through biochar assisted composting. **2022**, 7, 100121 2
- 88 Hybrid Metal Oxide/Biochar Materials for Wastewater Treatment Technology: A Review. **2022**, 7, 27062-27078 2
- 87 Microplastic contamination in soil agro-ecosystems: A review. **2022**, 100273
- 86 Connecting the evidence about organic pollutant sorption on soils with environmental regulation and decision-making: A scoping review. **2022**, 136164 0
- 85 Iron-modified biochar derived from sugarcane bagasse for adequate removal of aqueous imidacloprid: sorption mechanism study. 0
- 84 Biochar Is Not Durable for Remediation of Heavy Metal-Contaminated Soils Affected by Acid-Mine Drainage. **2022**, 10, 462 1
- 83 Effects of Straw Biochar on Heavy Metal Cu in Soil Under Different Conditions. 1-15
- 82 Combined Effect of Organic Amendments and Seed Placement Techniques on Sorghum Yield Under Salt-Stressed Conditions. 0
- 81 Manganese stabilization in mine tailings by MgO-loaded rice husk biochar: Performance and mechanisms. **2022**, 308, 136292 0
- 80 Biochar-mediated abiotic and biotic degradation of halogenated organic contaminants A review. **2022**, 852, 158381 0
- 79 Biological Treatment for Biochar Modification: Opportunities, Limitations, and Advantages. **2022**, 85-104 0

- 78 Application of Engineered Biochars for Soil Amelioration. **2022**, 331-351 o
- 77 Soil Contamination and Conservation. **2022**, 289-309 o
- 76 Hazards Caused by Mining Activities and Corresponding Treatment Technologies. 11, 122-133 o
- 75 Chemotactic Bacteria Facilitate the Dispersion of Nonmotile Bacteria through Micrometer-Sized Pores in Engineered Porous Media. **2022**, 56, 13975-13984 o
- 74 Biochar: its characteristics application and utilization of on environment. **2022**, o
- 73 Spatial Distribution and Potential Ecological Risk Assessment of Trace Metals in Reclaimed Mine Soils in Abuakwa South Municipal, Ghana. 1-21 o
- 72 Arsenic adsorption by different Fe-enriched biochars conditioned with sulfuric acid. 1
- 71 Remediation via biochar and potential health risk of heavy metal contaminated soils. **2022**, 81, o
- 70 The possibility of using biochar in plant protection from pathogens. **2022**, 50, 322-333 o
- 69 Jack Bean Development in Multimetal Contaminated Soil Amended with Coffee Waste-Derived Biochars. **2022**, 10, 2157 o
- 68 The Effects of Rabbit-Manure-Derived Biochar Co-Application with Compost on the Availability and Heavy Metal Uptake by Green Leafy Vegetables. **2022**, 12, 2552 1
- 67 Biochar Applications Reduces the Mobility of Cadmium Under Differing Soil Moisture Regimes. o
- 66 Review on the preparation of high value-added carbon materials from biomass. **2022**, 168, 105747 2
- 65 Metal-organic frameworks (MIL-101) decorated biochar as a highly efficient bio-based composite for immobilization of polycyclic aromatic hydrocarbons and copper in real contaminated soil. **2022**, 10, 108821 o
- 64 Biochar and *Eisenia fetida* (Savigny) promote sorghum growth and the immobilization of potentially toxic elements in contaminated soils. **2023**, 182, 104697 1
- 63 Modified Biochar as a More Promising Amendment Agent for Remediation of Pesticide-Contaminated Soils: Modification Methods, Mechanisms, Applications, and Future Perspectives. **2022**, 12, 11544 o
- 62 A comparative assessment of humic acid and biochar altering cadmium and arsenic fractions in a paddy soil. o
- 61 Effects of Biochar on Purslane-Mediated Transfer and Uptake of Soil Bioavailable Cadmium. **2022**, 233, 1

60	Accelerating Fe <sup>2+</sup> /Fe <sup>3+</sup> cycle via biochar to improve catalytic degradation efficiency of the Fe <sup>3+</sup> /Persulfate oxidation. <b>2022</b> , 120669	0
59	Sewage Sludge Biochars as Effective PFAS-Sorbents. <b>2022</b> , 130449	1
58	Deciphering soil amendments and actinomycetes for remediation of cadmium (Cd) contaminated farmland. <b>2023</b> , 249, 114388	0
57	Different feedstocks of biochar affected the bioavailability and uptake of heavy metals by wheat ( <i>Triticum aestivum</i> L.) plants grown in metal contaminated soil. <b>2023</b> , 217, 114845	3
56	Thermo-physical properties and microstructural behaviour of biochar-incorporated cementitious material. <b>2023</b> , 64, 105695	0
55	Adsorption of organochlorinated pesticides: Adsorption kinetic and adsorption isotherm study. <b>2023</b> , 17, 100823	0
54	Improvement of rural soil properties and states by biomass carbon under the concept of sustainability: A research progress. 10,	0
53	Mulching in lowland hay meadows drives an adaptive convergence of above- and below-ground traits reducing plasticity and improving biomass: A possible tool for enhancing phytoremediation. 13,	0
52	Producción de biocarbón a partir de la cáscara de <i>Theobroma cacao</i> L., cascarilla de <i>Oryza sativa</i> y <i>Coffea arabica</i> . <b>2022</b> , 2, 68-80	0
51	Effects of chicken manure substitution for mineral nitrogen fertilizer on crop yield and soil fertility in a reduced nitrogen input regime of North-Central China. 13,	0
50	Effects of high-carbon wood ash biochar on volunteer vegetation establishment and community composition on metal mine tailings.	0
49	Phytoextraction Potential of Chrysanthemum and Cumbu Napier Hybrid Grass to Remediate Chromium-Contaminated Soils Using Bioamendments. <b>2023</b> , 17,	0
48	Reapplication of biochar, sewage waste water, and NPK fertilizers affects soil fertility, aggregate stability, and carbon and nitrogen in dry-stable aggregates of semi-arid soil. <b>2022</b> , 161203	0
47	Pyrolysis temperature influences the capacity of biochar to immobilize copper and arsenic in mining soil remediation.	0
46	Carbonization characteristics of co-pyrolysis of sewage sludge and corn stalks and its agricultural benefits.	0
45	Trace Element Uptake by Willows Used for the Phytoremediation of Biosolids. <b>2023</b> , 13, 243	0
44	Impacts of Biochar and Vermicompost Addition on Physicochemical Characteristics, Metal Availability, and Microbial Communities in Soil Contaminated with Potentially Toxic Elements. <b>2023</b> , 15, 790	0
43	Biochar for the Removal of Emerging Pollutants from Aquatic Systems: A Review. <b>2023</b> , 20, 1679	0

- 42 A state-of-the-art review on cadmium uptake, toxicity, and tolerance in rice: From physiological response to remediation process. **2023**, 220, 115098 1
- 41 A review on adsorption characteristics and influencing mechanism of heavy metals in farmland soil. **2023**, 13, 3505-3519 0
- 40 Waste and biomass-based nanomaterials for CO2 capture. **2023**, 137-151 0
- 39 Biochar for sustainable remediation of soil. **2023**, 277-297 0
- 38 Experimental and numerical investigations of biochar-facilitated Cd<sup>2+</sup> transport in saturated porous media: role of solution pH and ionic strength. **2023**, 5, 0
- 37 Biochar as a negative emission technology: A synthesis of field research on greenhouse gas emissions. 0
- 36 How different is the remediation effect of biochar for cadmium contaminated soil in various cropping systems? A global meta-analysis. **2023**, 448, 130939 0
- 35 Biochar impacts on runoff and soil erosion by water: A systematic global scale meta-analysis. **2023**, 871, 161860 0
- 34 Benchmarking biochar with activated carbon for immobilizing leachable PAH and heterocyclic PAH in contaminated soils. **2023**, 325, 121417 0
- 33 Applications, impacts, and management of biochar persistent free radicals: A review. **2023**, 327, 121543 0
- 32 Black carbon derived from pyrolysis of maize straw and polystyrene microplastics affects soil biodiversity. **2023**, 881, 163398 0
- 31 Biochar for toxic chromium removal: Its impacts, mechanism, and future direction. 0
- 30 Rapid elimination of dicarboximide fungicides and their metabolite 3,5-dichloroaniline from soils by immobilized bacterial consortia. **2023**, 30, 103120 0
- 29 Nanomaterials in biochar: Review of their effectiveness in remediating heavy metal-contaminated soils. **2023**, 880, 163330 0
- 28 Analysis, occurrence and removal efficiencies of organophosphate flame retardants (OPFRs) in sludge undergoing anaerobic digestion followed by diverse thermal treatments. **2023**, 870, 161856 0
- 27 Vermitoxicity of aged biochar and exploring potential damage factors. **2023**, 172, 107787 0
- 26 Potential Role of Biochar on Capturing Soil Nutrients, Carbon Sequestration and Managing Environmental Challenges: A Review. **2023**, 15, 2527 2
- 25 Implications of Soil Microbial Community Assembly for Ecosystem Restoration: Patterns, Process, and Potential. 0



- 24 Carbon based adsorbents for the removal of U(VI) from aqueous medium: A state of the art review. **2023**, 52, 103458 ○
- 23 Review of Advances in the Utilization of Biochar-Derived Catalysts for Biodiesel Production. **2023**, 8, 8190-8200 ○
- 22 Molecular Sieve, Halloysite, Sepiolite and Expanded Clay as a Tool in Reducing the Content of Trace Elements in *Helianthus annuus* L. on Copper-Contaminated Soil. **2023**, 16, 1827 ○
- 21 Complementing compost with biochar for agriculture, soil remediation and climate mitigation. **2023**, 1-90 ○
- 20 Biochar Extracts Can Modulate the Toxicity of Persistent Free Radicals in the Nematode *Caenorhabditis elegans*. **2023**, 2, 71-83 ○
- 19 Chemical, biological and respirometry properties of soil under perennial crops fertilized with digestate. **2023**, 37, 111-128 ○
- 18 Biochar mitigates allelopathic effects in temperate trees. ○
- 17 Hierarchical Biobased Macroporous/Mesoporous Carbon: Fabrication, Characterization and Electrochemical/Ion Exchange Properties. **2023**, 16, 2101 ○
- 16 Sugarcane Bagasse Biochar Changes the Sorption Kinetics and Rice (*Oryza sativa* L.) Cadmium Uptake in a Paddy Soil. ○
- 15 Research Progress on Effects of Biochar on Soil Environment and Crop Nutrient Absorption and Utilization. **2023**, 15, 4861 ○
- 14 Heavy metal stabilization remediation in polluted soils with stabilizing materials: a review. ○
- 13 Date palm-magnetized biochar for in-situ stabilization of toxic metals in mining-polluted soil: evaluation using single-step extraction methods and phytoavailability. 1-12 ○
- 12 Biochar-clay, biochar-microorganism and biochar-enzyme composites for environmental remediation: a review. ○
- 11 Bamboo: A Sustainable Alternative for Biochar Production. **2023**, 265-295 ○
- 10 Insights into the mechanisms underlying the biodegradation of phenanthrene in biochar-amended soil: from bioavailability to soil microbial communities. **2023**, 5, ○
- 9 Fungal-Mediated Silver Nanoparticle and Biochar Synergy against Colorectal Cancer Cells and Pathogenic Bacteria. **2023**, 12, 597 ○
- 8 Sorption Characteristics of Methylene Blue on Medulla Tetrapanacis Biochar and its Activation Technology. **2023**, 234, ○
- 7 Comparison of the Efficiency of Micro- and Nanoparticles of Zero-Valent Iron in the Detoxification of Technogenically Polluted Soil. **2023**, 56, 238-246 ○

- 6 Role of Biochar in the Adsorption of Heavy Metals. **2023**, 293-307 o
- 5 Biochar as Soil Amendment for Mitigating Nutrients Stress in Crops. **2023**, 123-140 o
- 4 Biochar Application for Improving the Yield and Quality of Crops Under Climate Change. **2023**, 3-55 o
- 3 Biochar for Crop Protection from Soil Borne Diseases. **2023**, 231-246 o
- 2 Enhancement of phytoextraction efficiency coupling *Pteris vittata* with low-dose biochar in arsenic-contaminated soil. 1-9 o
- 1 The decomposition and emission factors of a wide range of PFAS in diverse, contaminated organic waste fractions undergoing dry pyrolysis. **2023**, 131447 o