JÃ¶rg Rinklebe

List of Publications by Year
in descending order

395 papers	29,891 citations	89 h-index	146 g-index
		3731	8630
403 all docs	403 docs citations	403 times ranked	16359 citing authors

#	Article	IF	Citations
1	Soil amendments for immobilization of potentially toxic elements in contaminated soils: A critical review. Environment International, 2020, 134, 105046.	10.0	701
2	Trace elements in the soil-plant interface: Phytoavailability, translocation, and phytoremediationâ€“A review. Earth-Science Reviews, 2017, 171, 621-645.	9.1	588
3	Biochar application to low fertility soils: A review of current status, and future prospects. Geoderma, 2019, 337, 536-554.	5.1	571
4	Metal contamination and bioremediation of agricultural soils for food safety and sustainability. Nature Reviews Earth & Environment, 2020, 1, 366-381.	29.7	493
5	Cycling of mercury in the environment: Sources, fate, and human health implications: A review. Critical Reviews in Environmental Science and Technology, 2017, 47, 693-794.	12.8	419
6	Response of microbial communities to biochar-amended soils: a critical review. Biochar, 2019, 1, 3-22.	12.6	419
7	Effect of biochar on cadmium bioavailability and uptake in wheat (Triticum aestivum L.) grown in a soil with aged contamination. Ecotoxicology and Environmental Safety, 2017, 140, 37-47.	6.0	360
8	Wood-based biochar for the removal of potentially toxic elements in water and wastewater: a critical review. International Materials Reviews, 2019, 64, 216-247.	19.3	355
9	A critical review on effects, tolerance mechanisms and management of cadmium in vegetables. Chemosphere, 2017, 182, 90-105.	8.2	352
10	Controlled variation of redox conditions in a floodplain soil: Impact on metal mobilization and biomethylation of arsenic and antimony. Geoderma, 2011, 160, 414-424.	5.1	338
11	Particulate plastics as a vector for toxic trace-element uptake by aquatic and terrestrial organisms and human health risk. Environment International, 2019, 131, 104937.	10.0	337
12	Technologies and perspectives for achieving carbon neutrality. Innovation(China), 2021, 2, 100180.	9.1	306
13	Health risk assessment of potentially toxic elements in soils along the Central Elbe River, Germany. Environment International, 2019, 126, 76-88.	10.0	299
14	A critical review on bioremediation technologies for Cr(VI)-contaminated soils and wastewater. Critical Reviews in Environmental Science and Technology, 2019, 49, 1027-1078.	12.8	298
15	Arsenic removal by perilla leaf biochar in aqueous solutions and groundwater: An integrated spectroscopic and microscopic examination. Environmental Pollution, 2018, 232, 31-41.	7.5	297
16	Interaction of arsenic with biochar in soil and water: A critical review. Carbon, 2017, 113, 219-230.	10.3	292
17	A critical prospective analysis of the potential toxicity of trace element regulation limits in soils worldwide: Are they protective concerning health risk assessment? - A review. Environment International, 2019, 127, 819-847.	10.0	280
18	Mercury speciation, transformation, and transportation in soils, atmospheric flux, and implications for risk management: A critical review. Environment International, 2019, 126, 747-761.	10.0	278

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19	Cadmium phytoremediation potential of Brassica crop species: A review. Science of the Total Environment, 2018, 631-632, 1175-1191.	8.0	275
20	Biochar Aging: Mechanisms, Physicochemical Changes, Assessment, And Implications for Field Applications. Environmental Science & Technology, 2020, 54, 14797-14814.	10.0	273
21	Impact of sugarcane bagasse-derived biochar on heavy metal availability and microbial activity: A field study. Chemosphere, 2018, 200, 274-282.	8.2	254
22	Biochar composition-dependent impacts on soil nutrient release, carbon mineralization, and potential environmental risk: A review. Journal of Environmental Management, 2019, 241, 458-467.	7.8	249
23	Heavy metal immobilization and microbial community abundance by vegetable waste and pine cone biochar of agricultural soils. Chemosphere, 2017, 174, 593-603.	8.2	245
24	Multifunctional applications of biochar beyond carbon storage. International Materials Reviews, 2022, 67, 150-200.	19.3	245
25	A critical review on arsenic removal from water using biochar-based sorbents: The significance of modification and redox reactions. Chemical Engineering Journal, 2020, 396, 125195.	12.7	243
26	A review of the distribution coefficients of trace elements in soils: Influence of sorption system, element characteristics, and soil colloidal properties. Advances in Colloid and Interface Science, 2013, 201-202, 43-56.	14.7	239
27	Transformation pathways and fate of engineered nanoparticles (ENPs) in distinct interactive environmental compartments: A review. Environment International, 2020, 138, 105646.	10.0	238
28	Waste-derived biochar for water pollution control and sustainable development. Nature Reviews Earth & Environment, 2022, 3, 444-460.	29.7	233
29	Mobility and phytoavailability of As and Pb in a contaminated soil using pine sawdust biochar under systematic change of redox conditions. Chemosphere, 2017, 178, 110-118.	8.2	231
30	Remediation of mercury contaminated soil, water, and air: A review of emerging materials and innovative technologies. Environment International, 2020, 134, 105281.	10.0	228
31	Impact of emerging and low cost alternative amendments on the (im)mobilization and phytoavailability of Cd and Pb in a contaminated floodplain soil. Ecological Engineering, 2015, 74, 319-326.	3.6	225
32	Bioavailability and risk assessment of potentially toxic elements in garden edible vegetables and soils around a highly contaminated former mining area in Germany. Journal of Environmental Management, 2017, 186, 192-200.	7.8	218
33	Soil organic carbon dynamics: Impact of land use changes and management practices: A review. Advances in Agronomy, 2019, , 1-107.	5.2	216
34	Global soil pollution by toxic elements: Current status and future perspectives on the risk assessment and remediation strategies â€“ A review. Journal of Hazardous Materials, 2021, 417, 126039.	12.4	213
35	Influence of soil properties and feedstocks on biochar potential for carbon mineralization and improvement of infertile soils. Geoderma, 2018, 332, 100-108.	5.1	206
36	Biochar affects the dissolved and colloidal concentrations of Cd, Cu, Ni, and Zn and their phytoavailability and potential mobility in a mining soil under dynamic redox-conditions. Science of the Total Environment, 2018, 624, 1059-1071.	8.0	201

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37	New trends in biochar pyrolysis and modification strategies: feedstock, pyrolysis conditions, sustainability concerns and implications for soil amendment. Soil Use and Management, 2020, 36, 358-386.	4.9	200
38	Cadmium stress in plants: A critical review of the effects, mechanisms, and tolerance strategies. Critical Reviews in Environmental Science and Technology, 2022, 52, 675-726.	12.8	196
39	Amendment of biochar reduces the release of toxic elements under dynamic redox conditions in a contaminated floodplain soil. Chemosphere, 2016, 142, 41-47.	8.2	183
40	Release of As, Ba, Cd, Cu, Pb, and Sr under pre-definite redox conditions in different rice paddy soils originating from the U.S.A. and Asia. Geoderma, 2016, 270, 21-32.	5.1	182
41	Sorption of norfloxacin, sulfamerazine and oxytetracycline by KOH-modified biochar under single and ternary systems. Bioresource Technology, 2018, 263, 385-392.	9.6	181
42	Arsenic removal by Japanese oak wood biochar in aqueous solutions and well water: Investigating arsenic fate using integrated spectroscopic and microscopic techniques. Science of the Total Environment, 2018, 621, 1642-1651.	8.0	175
43	Recovery, regeneration and sustainable management of spent adsorbents from wastewater treatment streams: A review. Science of the Total Environment, 2022, 822, 153555.	8.0	174
44	Chernozemâ€"Soil of the Year 2005. Journal of Plant Nutrition and Soil Science, 2005, 168, 725-740.	1.9	172
45	Remediation of poly- and perfluoroalkyl substances (PFAS) contaminated soils â€“ To mobilize or to immobilize or to degrade?. Journal of Hazardous Materials, 2021, 401, 123892.	12.4	169
46	Soil and maize contamination by trace elements and associated health risk assessment in the industrial area of Volos, Greece. Environment International, 2019, 124, 79-88.	10.0	167
47	Roles of biochar-derived dissolved organic matter in soil amendment and environmental remediation: A critical review. Chemical Engineering Journal, 2021, 424, 130387.	12.7	167
48	Redox effects on release kinetics of arsenic, cadmium, cobalt, and vanadium in Wax Lake Deltaic freshwater marsh soils. Chemosphere, 2016, 150, 740-748.	8.2	166
49	Customised fabrication of nitrogen-doped biochar for environmental and energy applications. Chemical Engineering Journal, 2020, 401, 126136.	12.7	158
50	A critical review on performance indicators for evaluating soil biota and soil health of biochar-amended soils. Journal of Hazardous Materials, 2021, 414, 125378.	12.4	155
51	SARS-CoV-2 coronavirus in water and wastewater: A critical review about presence and concern. Environmental Research, 2021, 193, 110265.	7.5	150
52	Iron-modified biochar and water management regime-induced changes in plant growth, enzyme activities, and phytoavailability of arsenic, cadmium and lead in a paddy soil. Journal of Hazardous Materials, 2021, 407, 124344.	12.4	150
53	Remediation of soils and sediments polluted with polycyclic aromatic hydrocarbons: To immobilize, mobilize, or degrade?. Journal of Hazardous Materials, 2021, 420, 126534.	12.4	150
54	Responses of wheat (Triticum aestivum) plants grown in a Cd contaminated soil to the application of iron oxide nanoparticles. Ecotoxicology and Environmental Safety, 2019, 173, 156-164.	6.0	145

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55	Geochemical fractions of chromium, copper, and zinc and their vertical distribution in floodplain soil profiles along the Central Elbe River, Germany. Geoderma, 2014, 228-229, 142-159.	5.1	144
56	Sea Level Rise Induced Arsenic Release from Historically Contaminated Coastal Soils. Environmental Science & Technology, 2017, 51, 5913-5922.	10.0	143
57	Occurrence of contaminants in drinking water sources and the potential of biochar for water quality improvement: A review. Critical Reviews in Environmental Science and Technology, 2020, 50, 549-611.	12.8	143
58	Major Biogeochemical Processes in Soils-A Microcosm Incubation from Reducing to Oxidizing Conditions. Soil Science Society of America Journal, 2007, 71, 1406-1417.	2.2	142
59	Removing tetracycline and Hg(II) with ball-milled magnetic nanobiochar and its potential on polluted irrigation water reclamation. Journal of Hazardous Materials, 2020, 384, 121095.	12.4	140
60	Biochar-induced metal immobilization and soil biogeochemical process: An integrated mechanistic approach. Science of the Total Environment, 2020, 698, 134112.	8.0	139
61	Prediction of Soil Heavy Metal Immobilization by Biochar Using Machine Learning. Environmental Science & Technology, 2022, 56, 4187-4198.	10.0	138
62	Exploring the arsenic removal potential of various biosorbents from water. Environment International, 2019, 123, 567-579.	10.0	130
63	Fabrication of engineered biochar from paper mill sludge and its application into removal of arsenic and cadmium in acidic water. Bioresource Technology, 2017, 246, 69-75.	9.6	129
64	Recent advances in control technologies for non-point source pollution with nitrogen and phosphorous from agricultural runoff: current practices and future prospects. Applied Biological Chemistry, 2020, 63, .	1.9	129
65	Residual effects of monoammonium phosphate, gypsum and elemental sulfur on cadmium phytoavailability and translocation from soil to wheat in an effluent irrigated field. Chemosphere, 2017, 174, 515-523.	8.2	128
66	Mitigation of indoor air pollution: A review of recent advances in adsorption materials and catalytic oxidation. Journal of Hazardous Materials, 2021, 405, 124138.	12.4	128
67	Antimony contamination and its risk management in complex environmental settings: A review. Environment International, 2022, 158, 106908.	10.0	125
68	Bamboo- and pig-derived biochars reduce leaching losses of dibutyl phthalate, cadmium, and lead from co-contaminated soils. Chemosphere, 2018, 198, 450-459.	8.2	121
69	A review of green remediation strategies for heavy metal contaminated soil. Soil Use and Management, 2021, 37, 936-963.	4.9	117
70	Speciation, transportation, and pathways of cadmium in soil-rice systems: A review on the environmental implications and remediation approaches for food safety. Environment International, 2021, 156, 106749.	10.0	116
71	Redox chemistry of vanadium in soils and sediments: Interactions with colloidal materials, mobilization, speciation, and relevant environmental implications- A review. Advances in Colloid and Interface Science, 2019, 265, 1-13.	14.7	115
72	Assessing the Mobilization of Cadmium, Lead, and Nickel Using a Seven-Step Sequential Extraction Technique in Contaminated Floodplain Soil Profiles Along the Central Elbe River, Germany. Water, Air, and Soil Pollution, 2014, 225, 1.	2.4	114

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73	Arsenic speciation and biotransformation pathways in the aquatic ecosystem: The significance of algae. Journal of Hazardous Materials, 2021, 403, 124027.	12.4	111
74	Biogeochemical Factors Governing Cobalt, Nickel, Selenium, and Vanadium Dynamics in Periodically Flooded Egyptian North Nile Delta Rice Soils. Soil Science Society of America Journal, 2014, 78, 1065-1078.	2.2	110
75	Contamination of Floodplain Soils along the Wupper River, Germany, with As, Co, Cu, Ni, Sb, and Zn and the Impact of Pre-definite Redox Variations on the Mobility of These Elements. Soil and Sediment Contamination, 2014, 23, 779-799.	1.9	110
76	A review of biochar-based sorbents for separation of heavy metals from water. International Journal of Phytoremediation, 2020, 22, 111-126.	3.1	110
77	Influence of biochar and soil properties on soil and plant tissue concentrations of Cd and Pb: A meta-analysis. Science of the Total Environment, 2021, 755, 142582.	8.0	109
78	Conversion of biological solid waste to graphene-containing biochar for water remediation: A critical review. Chemical Engineering Journal, 2020, 390, 124611.	12.7	108
79	Integration of silicon and secondary metabolites in plants: a significant association in stress tolerance. Journal of Experimental Botany, 2020, 71, 6758-6774.	4.8	107
80	Phytomanagement of heavy metals in contaminated soils using sunflower: A review. Critical Reviews in Environmental Science and Technology, 2016, 46, 1498-1528.	12.8	105
81	Microbial diversity in three floodplain soils at the Elbe River (Germany). Soil Biology and Biochemistry, 2006, 38, 2144-2151.	8.8	104
82	Redox-induced mobilization of Ag, Sb, Sn, and Tl in the dissolved, colloidal and solid phase of a biochar-treated and un-treated mining soil. Environment International, 2020, 140, 105754.	10.0	104
83	Lysimeter trials to assess the impact of different floodâ€“dry-cycles on the dynamics of pore water concentrations of As, Cr, Mo and V in a contaminated floodplain soil. Geoderma, 2014, 228-229, 5-13.	5.1	101
84	Temporal dynamics of pore water concentrations of Cd, Co, Cu, Ni, and Zn and their controlling factors in a contaminated floodplain soil assessed by undisturbed groundwater lysimeters. Environmental Pollution, 2014, 191, 223-231.	7.5	99
85	Micro (nano) plastic pollution: The ecological influence on soil-plant system and human health. Science of the Total Environment, 2021, 788, 147815.	8.0	99
86	Elucidating the differentiation of soil heavy metals under different land uses with geographically weighted regression and self-organizing map. Environmental Pollution, 2020, 260, 114065.	7.5	98
87	Arsenic removal by natural and chemically modified water melon rind in aqueous solutions and groundwater. Science of the Total Environment, 2018, 645, 1444-1455.	8.0	96
88	Arsenic, chromium, molybdenum, and selenium: Geochemical fractions and potential mobilization in riverine soil profiles originating from Germany and Egypt. Chemosphere, 2017, 180, 553-563.	8.2	95
89	Various soil amendments and environmental wastes affect the (im)mobilization and phytoavailability of potentially toxic elements in a sewage effluent irrigated sandy soil. Ecotoxicology and Environmental Safety, 2017, 142, 375-387.	6.0	95
90	Supercritical carbon dioxide extraction of plant phytochemicals for biological and environmental applications â€“ A review. Chemosphere, 2021, 271, 129525.	8.2	93

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91	Engineered biochar for environmental decontamination in aquatic and soil systems: a review. , 2022, 1, .		93
92	Impact of biochar on mobilization, methylation, and ethylation of mercury under dynamic redox conditions in a contaminated floodplain soil. Environment International, 2019, 127, 276-290.	10.0	92
93	Trace elements-induced phytohormesis: A critical review and mechanistic interpretation. Critical Reviews in Environmental Science and Technology, 2020, 50, 1984-2015.	12.8	92
94	Mechanistic insights into red mud, blast furnace slag, or metakaolin-assisted stabilization/solidification of arsenic-contaminated sediment. Environment International, 2019, 133, 105247.	10.0	91
95	Enhanced sorption of trivalent antimony by chitosan-loaded biochar in aqueous solutions: Characterization, performance and mechanisms. Journal of Hazardous Materials, 2022, 425, 127971.	12.4	89
96	Exploiting biogeochemical and spectroscopic techniques to assess the geochemical distribution and release dynamics of chromium and lead in a contaminated floodplain soil. Chemosphere, 2016, 150, 390-397.	8.2	88
97	Redox chemistry of nickel in soils and sediments: A review. Chemosphere, 2017, 179, 265-278.	8.2	88
98	Freundlich sorption parameters for cadmium, copper, nickel, lead, and zinc for different soils: Influence of kinetics. Geoderma, 2018, 324, 80-88.	5.1	88
99	Fe/Mn- and P-modified drinking water treatment residuals reduced Cu and Pb phytoavailability and uptake in a mining soil. Journal of Hazardous Materials, 2021, 403, 123628.	12.4	88
100	The beneficial and hazardous effects of selenium on the health of the soil-plant-human system: An overview. Journal of Hazardous Materials, 2022, 422, 126876.	12.4	88
101	Animal carcass- and wood-derived biochars improved nutrient bioavailability, enzyme activity, and plant growth in metal-phthalic acid ester co-contaminated soils: A trial for reclamation and improvement of degraded soils. Journal of Environmental Management, 2020, 261, 110246.	7.8	86
102	Carbon defects in biochar facilitated nitrogen doping: The significant role of pyridinic nitrogen in peroxymonosulfate activation and ciprofloxacin degradation. Chemical Engineering Journal, 2022, 441, 135864.	12.7	86
103	Phytoremediation potential of twelve wild plant species for toxic elements in a contaminated soil. Environment International, 2021, 146, 106233.	10.0	85
104	Field trials of phytomining and phytoremediation: A critical review of influencing factors and effects of additives. Critical Reviews in Environmental Science and Technology, 2020, 50, 2724-2774.	12.8	84
105	Improving the humification and phosphorus flow during swine manure composting: A trial for enhancing the beneficial applications of hazardous biowastes. Journal of Hazardous Materials, 2022, 425, 127906.	12.4	83
106	Apricot shell- and apple tree-derived biochar affect the fractionation and bioavailability of Zn and Cd as well as the microbial activity in smelter contaminated soil. Environmental Pollution, 2020, 264, 114773.	7.5	82
107	Chemical recycling of plastic waste via thermocatalytic routes. Journal of Cleaner Production, 2021, 321, 128989.	9.3	81
108	Impact of systematic change of redox potential on the leaching of Ba, Cr, Sr, and V from a riverine soil into water. Journal of Soils and Sediments, 2015, 15, 623-633.	3.0	80

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109	Arsenic contamination in abandoned and active gold mine spoils in Ghana: Geochemical fractionation, speciation, and assessment of the potential human health risk. Environmental Pollution, 2020, 261, 114116.	7.5	80
110	Aggregation of floodplain soils based on classification principles to predict concentrations of nutrients and pollutants. Geoderma, 2007, 141, 210-223.	5.1	79
111	Potentially toxic elements in solid waste streams: Fate and management approaches. Environmental Pollution, 2019, 253, 680-707.	7.5	79
112	Sorption mechanisms of lead on silicon-rich biochar in aqueous solution: Spectroscopic investigation. Science of the Total Environment, 2019, 672, 572-582.	8.0	79
113	Insights into upstream processing of microalgae: A review. Bioresource Technology, 2021, 329, 124870.	9.6	79
114	Sustainable applications of rice feedstock in agro-environmental and construction sectors: A global perspective. Renewable and Sustainable Energy Reviews, 2022, 153, 111791.	16.4	78
115	Effect of biochars on the bioavailability of cadmium and di-(2-ethylhexyl) phthalate to Brassica chinensis L. in contaminated soils. Science of the Total Environment, 2019, 678, 43-52.	8.0	77
116	Soil contamination by potentially toxic elements and the associated human health risk in geo- and anthropogenic contaminated soils: A case study from the temperate region (Germany) and the arid region (Egypt). Environmental Pollution, 2020, 262, 114312.	7.5	77
117	Immobilization of cadmium and lead using phosphorus-rich animal-derived and iron-modified plant-derived biochars under dynamic redox conditions in a paddy soil. Environment International, 2021, 156, 106628.	10.0	77
118	Phytoextraction of potentially toxic elements by Indian mustard, rapeseed, and sunflower from a contaminated riparian soil. Environmental Geochemistry and Health, 2015, 37, 953-967.	3.4	76
119	A chronicle of SARS-CoV-2: Seasonality, environmental fate, transport, inactivation, and antiviral drug resistance. Journal of Hazardous Materials, 2021, 405, 124043.	12.4	76
120	Pine sawdust biomass and biochars at different pyrolysis temperatures change soil redox processes. Science of the Total Environment, 2018, 625, 147-154.	8.0	75
121	Waste-derived compost and biochar amendments for stormwater treatment in bioretention column: Co-transport of metals and colloids. Journal of Hazardous Materials, 2020, 383, 121243.	12.4	75
122	Challenges and opportunities in sustainable management of microplastics and nanoplastics in the environment. Environmental Research, 2022, 207, 112179.	7.5	75
123	Dynamics of mercury fluxes and their controlling factors in large Hg-polluted floodplain areas. Environmental Pollution, 2010, 158, 308-318.	7.5	74
124	Impact of various amendments on immobilization and phytoavailability of nickel and zinc in a contaminated floodplain soil. International Journal of Environmental Science and Technology, 2015, 12, 2765-2776.	3.5	74
125	Enhancing phytoremediation of hazardous metal(loid)s using genome engineering CRISPRâ€“Cas9 technology. Journal of Hazardous Materials, 2021, 414, 125493.	12.4	74
126	Distribution, behaviour, bioavailability and remediation of poly- and per-fluoroalkyl substances (PFAS) in solid biowastes and biowaste-treated soil. Environment International, 2021, 155, 106600.	10.0	74

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127	Challenges in microbially and chelate-assisted phytoextraction of cadmium and lead â€“ A review. Environmental Pollution, 2021, 287, 117667.	7.5	74
128	Phytotoxicity attenuation in Vigna radiata under heavy metal stress at the presence of biochar and N fixing bacteria. Journal of Environmental Management, 2017, 186, 293-300.	7.8	73
129	Biochar composites: Emerging trends, field successes and sustainability implications. Soil Use and Management, 2022, 38, 14-38.	4.9	73
130	Review on the interactions of arsenic, iron (oxy)(hydr)oxides, and dissolved organic matter in soils, sediments, and groundwater in a ternary system. Chemosphere, 2022, 286, 131790.	8.2	73
131	Heavy metal mobility in intertidal sediments of the Scheldt estuary: Field monitoring. Science of the Total Environment, 2009, 407, 2919-2930.	8.0	72
132	Potential Emergence of Antiviral-Resistant Pandemic Viruses via Environmental Drug Exposure of Animal Reservoirs. Environmental Science & Technology, 2020, 54, 8503-8505.	10.0	72
133	Pristine and iron-engineered animal- and plant-derived biochars enhanced bacterial abundance and immobilized arsenic and lead in a contaminated soil. Science of the Total Environment, 2021, 763, 144218.	8.0	72
134	Sulfur-modified biochar as a soil amendment to stabilize mercury pollution: An accelerated simulation of long-term aging effects. Environmental Pollution, 2020, 264, 114687.	7.5	71
135	Soil lead immobilization by biochars in short-term laboratory incubation studies. Environment International, 2019, 127, 190-198.	10.0	70
136	Environmental transformation and nano-toxicity of engineered nano-particles (ENPs) in aquatic and terrestrial organisms. Critical Reviews in Environmental Science and Technology, 2020, 50, 2523-2581.	12.8	70
137	Elevation in wildfire frequencies with respect to the climate change. Journal of Environmental Management, 2022, 301, 113769.	7.8	70
138	Redox-induced mobilization of copper, selenium, and zinc in deltaic soils originating from Mississippi (U.S.A.) and Nile (Egypt) River Deltas: A better understanding of biogeochemical processes for safe environmental management. Journal of Environmental Management, 2017, 186, 131-140.	7.8	69
139	Removal of various contaminants from water by renewable lignocellulose-derived biosorbents: a comprehensive and critical review. Critical Reviews in Environmental Science and Technology, 2019, 49, 2155-2219.	12.8	69
140	Release dynamics of As, Co, and Mo in a biochar treated soil under pre-definite redox conditions. Science of the Total Environment, 2019, 657, 686-695.	8.0	69
141	Ammonium nitrogen recovery from digestate by hydrothermal pretreatment followed by activated hydrochar sorption. Chemical Engineering Journal, 2020, 379, 122254.	12.7	69
142	Fate of arsenic in living systems: Implications for sustainable and safe food chains. Journal of Hazardous Materials, 2021, 417, 126050.	12.4	69
143	Rare earth elements in German soils - A review. Chemosphere, 2018, 205, 514-523.	8.2	68
144	Characteristics and mechanisms of cadmium adsorption onto biogenic aragonite shells-derived biosorbent: Batch and column studies. Journal of Environmental Management, 2019, 241, 535-548.	7.8	68

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145	Earthworms as candidates for remediation of potentially toxic elements contaminated soils and mitigating the environmental and human health risks: A review. Environment International, 2022, 158, 106924.	10.0	68
146	Accumulation of chromium in plants and its repercussion in animals and humans. Environmental Pollution, 2022, 301, 119044.	7.5	67
147	Bone-derived biochar improved soil quality and reduced Cd and Zn phytoavailability in a multi-metal contaminated mining soil. Environmental Pollution, 2021, 277, 116800.	7.5	66
148	Prospects and environmental sustainability of phyconanotechnology: A review on algae-mediated metal nanoparticles synthesis and mechanism. Environmental Research, 2022, 212, 113140.	7.5	66
149	Comparative analysis biochar and compost-induced degradation of di-(2-ethylhexyl) phthalate in soils. Science of the Total Environment, 2018, 625, 987-993.	8.0	65
150	Exposure to nickel oxide nanoparticles insinuates physiological, ultrastructural and oxidative damage: A life cycle study on Eisenia fetida. Environmental Pollution, 2019, 254, 113032.	7.5	65
151	Bioaccumulation of potentially toxic elements by submerged plants and biofilms: A critical review. Environment International, 2019, 131, 105015.	10.0	65
152	Bioavailability and health risk assessment of potentially toxic elements in Thriasio Plain, near Athens, Greece. Environmental Geochemistry and Health, 2017, 39, 319-330.	3.4	64
153	Mitigation of mercury accumulation in rice using rice hull-derived biochar as soil amendment: A field investigation. Journal of Hazardous Materials, 2020, 388, 121747.	12.4	64
154	Groundwater hydrochemistry, source identification and pollution assessment in intensive industrial areas, eastern Chinese loess plateau. Environmental Pollution, 2021, 278, 116930.	7.5	64
155	(Im)mobilization and speciation of lead under dynamic redox conditions in a contaminated soil amended with pine sawdust biochar. Environment International, 2020, 135, 105376.	10.0	63
156	Influence of biochar on trace element uptake, toxicity and detoxification in plants and associated health risks: A critical review. Critical Reviews in Environmental Science and Technology, 2022, 52, 2803-2843.	12.8	63
157	Treatment processes to eliminate potential environmental hazards and restore agronomic value of sewage sludge: A review. Environmental Pollution, 2022, 293, 118564.	7.5	63
158	Combined application of EDDS and EDTA for removal of potentially toxic elements under multiple soil washing schemes. Chemosphere, 2018, 205, 178-187.	8.2	62
159	Hydroxyapatite tailored hierarchical porous biochar composite immobilized Cd(II) and Pb(II) and mitigated their hazardous effects in contaminated water and soil. Journal of Hazardous Materials, 2022, 437, 129330.	12.4	62
160	Lipid biomarkers for assessment of microbial communities in floodplain soils of the Elbe River (Germany). Wetlands, 2009, 29, 353-362.	1.5	61
161	Impact of controlled redox conditions on nickel in a serpentine soil. Journal of Soils and Sediments, 2011, 11, 406-415.	3.0	61
162	Trace element dynamics of biosolids-derived microbeads. Chemosphere, 2018, 199, 331-339.	8.2	61

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163	Use of biochar to reduce mercury accumulation in Oryza sativa L: A trial for sustainable management of historically polluted farmlands. Environment International, 2021, 153, 106527.	10.0	61
164	Mechanistic insights into the (im)mobilization of arsenic, cadmium, lead, and zinc in a multi-contaminated soil treated with different biochars. Environment International, 2021, 156, 106638.	10.0	61
165	Artificial intelligence (AI) applications in adsorption of heavy metals using modified biochar. Science of the Total Environment, 2021, 801, 149623.	8.0	61
166	Manganese oxide-modified biochar: production, characterization and applications for the removal of pollutants from aqueous environments - a review. Bioresource Technology, 2022, 346, 126581.	9.6	60
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168	Geochemical distribution of Co, Cu, Ni, and Zn in soil profiles of Fluvisols, Luvisols, Gleysols, and Calcisols originating from Germany and Egypt. Geoderma, 2017, 307, 122-138.	5.1	58
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