Challenges and opportunities in the phytoremediation of heavy metals contaminated soils: A review

DOI: 10.1016/j.ecoenv.2015.12.023
Ecotoxicology and Environmental Safety, 2016, 126, 111-121.

#	Paper	IF	Citations
729	Bioaccumulation and translocation of heavy metals by nine native plant species grown at a sewage sludge dump site. **2016**, 18, 1075-85		57
728	Recycling of hyper-accumulator: Synthesis of ZnO nanoparticles and photocatalytic degradation for dichlorophenol. **2016**, 680, 500-505		34
727	Impact of CaO, fly ash, sulfur and NaS on the (im)mobilization and phytoavailability of Cd, Cu and Pb in contaminated soil. *Ecotoxicology and Environmental Safety*, **2016**, 134P1, 116-123	7	54
726	Lead uptake increases drought tolerance of wild type and transgenic poplar (Populus tremula x P. alba) overexpressing gsh 1. **2016**, 216, 773-785		19
725	Cadmium accumulation is enhanced by ammonium compared to nitrate in two hyperaccumulators, without affecting speciation. **2016**, 67, 5041-50		58
724	Mechanisms of Cd and Cr removal and tolerance by macrofungus Pleurotus ostreatus HAU-2. **2017**, 330, 1-8		56
723	Possible developments for ex situ phytoremediation of contaminated sediments, in tropical and subtropical regions - Review. **2017**, 182, 707-719		17
722	Use of selenium to alleviate naphthalene induced oxidative stress in Trifolium repens L. *Ecotoxicology and Environmental Safety*, **2017**, 143, 1-5	7	10
721	Arsenic-containing soil from geogenic source in Hong Kong: Leaching characteristics and stabilization/solidification. **2017**, 182, 31-39		87
720	Recent Advances in Phytoremediation Technology. **2017**, 227-241		18
719	Effect of Nickel Impregnation on Wood Gasification Mechanism. **2017**, 8, 2843-2852		18
718	Advances in microbe-assisted reclamation of heavy metal contaminated soils over the last decade: A review. **2017**, 198, 132-143		131
717	A comparison of technologies for remediation of heavy metal contaminated soils. **2017**, 182, 247-268		539
716	In Situ Resource Recovery from Waste Repositories: Exploring the Potential for Mobilization and Capture of Metals from Anthropogenic Ores. **2017**, 3, 375-392		17
715	Genomics and Genetic Engineering in Phytoremediation of Arsenic. **2017**, 171-186		4
714	An Integrated H-G Scheme Identifying Areas for Soil Remediation and Primary Heavy Metal Contributors: A Risk Perspective. **2017**, 7, 341		10
713	Cadmium adsorption, chelation and compartmentalization limit root-to-shoot translocation of cadmium in rice (Oryza sativa L.). **2017**, 24, 11319-11330		31

712	The effects of Pantoea sp. strain Y4-4 on alfalfa in the remediation of heavy-metal-contaminated soil, and auxiliary impacts of plant residues on the remediation of saline-alkali soils. **2017**, 63, 278-286		8
711	Accumulation, sources and health risks of trace metals in elevated geochemical background soils used for greenhouse vegetable production in southwestern China. *Ecotoxicology and Environmental Safety*, **2017**, 137, 233-239	7	58
710	Effects of waterlogging and cadmium on ecophysiological responses and metal bio-accumulation in Bermuda grass (Cynodon dactylon). **2017**, 76, 1		7
709	Dynamic imaging of metallic contamination plume based on self-potential data. **2017**, 27, 1822-1830		6
708	Translocation of cadmium in Ocimum basilicum at low concentration of CdSSe nanoparticles. **2017**, 9, 314-318		14
707	Effect of phosphate minerals on phytoremediation of arsenic contaminated groundwater using an arsenic-hyperaccumulator. **2017**, 8, 366-372		12
706	Ammonium-based fertilizers enhance Cd accumulation in Carpobrotus rossii grown in two soils differing in pH. **2017**, 188, 689-696		29
705	Heavy metals in the soils and plants from a typical restored coal-mining area of Huainan coalfield, China. **2017**, 189, 484		13
704	Phytoremediation of cadmium-polluted soil by Chlorophytum laxum combined with chitosan-immobilized cadmium-resistant bacteria. **2017**, 24, 19249-19258		18
703	Phytoremediation of contaminated soils by heavy metals and PAHs. A brief review. **2017**, 8, 309-326		193
702	Metals in mine wastes: environmental pollution and soil remediation approaches a review. **2017**, 1-16		8
701	Microbes from mined sites: Harnessing their potential for reclamation of derelict mine sites. **2017**, 230, 495-505		56
700	Study of the potential of barnyard grass for the remediation of Cd- and Pb-contaminated soil. **2017**, 189, 224		5
699	Heavy metal contamination of soil and tree-ring in urban forest around highway in Shanghai, China. **2017**, 23, 1745-1762		7
698	Is annual or perennial harvesting more efficient in Ni phytoextraction?. **2017**, 418, 205-218		13
697	Pongamia pinnata inoculated with Bradyrhizobium liaoningense PZHK1 shows potential for phytoremediation of mine tailings. **2017**, 101, 1739-1751		17
696	Role of Plant Growth Promoting Rhizobacteria in Reclamation of Wasteland. **2017**, 61-80		4
695	Use of Biochar as an Amendment for Remediation of Heavy Metal-Contaminated Soils: Prospects and Challenges. **2017**, 27, 991-1014		103

694	Above- and Belowground Development of a Fast-Growing Willow Planted in Acid-Generating Mine Technosol. **2017**, 46, 1462-1471		7
693	Mycorrhiza-Assisted Phytoremediation. **2017**, 83, 127-188		34
692	Soil Fictions: Addressing Urban Soils between Art, Soil Ecology, and Anthropology. **2017**, 10, 20-44		1
691	Comparative study of Zn-phytoextraction potential in guar (Cyamopsis tetragonoloba L.) and sesame (Sesamum indicum L.): tolerance and accumulation. **2018**, 2, 29-38		1
690	Influence of Nickel on Biomass Pyro-Gasification: Coupled Thermodynamic and Experimental Investigations. **2018**, 57, 9788-9797		10
689	Potential of Napier grass with cadmium-resistant bacterial inoculation on cadmium phytoremediation and its possibility to use as biomass fuel. **2018**, 201, 511-518		25
688	Microbe and plant assisted-remediation of organic xenobiotics and its enhancement by genetically modified organisms and recombinant technology: A review. **2018**, 628-629, 1582-1599		77
687	Antioxidative enzymes and expression of rbcL gene as tools to monitor heavy metal-related stress in plants. **2018**, 218, 71-78		23
686	Adequate S supply reduces the damage of high Cd exposure in roots and increases N, S and Mn uptake by Massai grass grown in hydroponics. **2018**, 148, 35-46		22
685	Accumulation and toxicity of lanthanum and neodymium in horticultural plants (Brassica chinensis L. and Helianthus annuus L.). **2018**, 96, 2263-2272		12
684	Removal of metal(oid)s from contaminated water using iron-coated peat sorbent. **2018**, 198, 290-296		18
683	Heavy metal contents and enrichment characteristics of dominant plants in wasteland of the downstream of a lead-zinc mining area in Guangxi, Southwest China. *Ecotoxicology and Environmental Safety*, **2018**, 151, 266-271	7	52
682	Total Chromium Captured by Maize (Zea Mays) Plants is Increased by Phosphate and Iron Supplementation in the Soil. **2018**, 49, 615-625		4
681	Heavy metals status, transport mechanisms, sources, and factors affecting their mobility in Chinese agricultural soils. **2018**, 77, 1		29
680	Green for Brown (G4B): A Novel Tool for Evaluating Phytoextraction in Soils Polluted by Heavy Metals. **2018**, 257-258		1
679	Assisted phytostabilization of a multicontaminated mine technosol using biochar amendment: Early stage evaluation of biochar feedstock and particle size effects on As and Pb accumulation of two Salicaceae species (Salix viminalis and Populus euramericana). **2018**, 194, 316-326		42
678	Sequential application of soil washing and phytoremediation in the land of fires. **2018**, 206, 1081-1089		27
677	(Im)mobilization of soil heavy metals using CaO, FA, sulfur, and Na2S: a 1-year incubation study. **2018**, 15, 607-620		16

676	Kinetics, adsorption and desorption of Cd(II) and Cu(II) on natural allophane: Effect of iron oxide coating. **2018**, 319, 70-79		26
675	Effects of cadmium stress on growth and amino acid metabolism in two Compositae plants. *Ecotoxicology and Environmental Safety*, **2018**, 158, 300-308	7	46
674	Rehabilitation of Iron Ore Mine Soil Contaminated with Heavy Metals Using Rosemary Phytoremediation-Assisted Mycorrhizal Arbuscular Fungi Bioaugmentation and Fibrous Clay Mineral Immobilization. **2018**, 42, 431-441		7
673	Cd resistant characterization of mutant strain irradiated by carbon-ion beam. **2018**, 353, 1-8		7
672	Potential for Phytoextraction of Cu by Sesamum indicum L. and Cyamopsis tetragonoloba L.: A Green Solution to Decontaminate Soil. **2018**, 2, 133-143		12
671	Rhizosphere effects of Loliumperenne L. and Beta vulgaris var. cicla L. on the immobilization of Cd by modified nanoscale black carbon in contaminated soil. **2018**, 18, 1-11		23
670	Seasonal variations of mercury levels and human health risk in vegetables from Arid Oasis (Shihezi city), Xinjiang, Northwest China. **2018**, 24, 122-136		4
669	Phytoremediation of contaminated soils using ornamental plants. **2018**, 26, 43-54		39
668	Remediation of contaminated soils by biotechnology with nanomaterials: bio-behavior, applications, and perspectives. **2018**, 38, 455-468		108
667	Phytoremediation Techniques for the Removal of Dye in Wastewater. **2018**, 243-252		12
666	Physiological and Biochemical Mechanisms Preventing Cd Toxicity in the New Hyperaccumulator Abelmoschus manihot. **2018**, 37, 709-718		32
665	Mine tailing disposal sites: contamination problems, remedial options and phytocaps for sustainable remediation. **2018**, 17, 205-228		60
664	Phytoextraction with Salix viminalis in a moderately to strongly contaminated area. **2018**, 25, 3275-3290		12
663	Differential behavior of the summer cover crops in the absorption and translocation of copper. **2018**, 48,		4
662	Fitoextracci□ de cadmio con hierba mora (Solanum nigrum L.) en suelos cultivados con cacao (Theobroma cacao L.). **2018**, 67, 420-424		1
661	Differences in phytoextraction by the cadmium and zinc hyperaccumulator Sedum plumbizincicola in greenhouse, polytunnel and field conditions. **2018**, 20, 1400-1407		
660	Cadmium-Resistant Oyster Mushrooms from North China for Mycoremediation. **2018**, 28, 848-855		5
659	Serpentine Mining Wastes□Materials for Soil Rehabilitation in Cu-Ni Polluted Wastelands. **2018**, 183, 141-149		8

658	Transmembrane transport and stress response genes play an important role in adaptation of Arabidopsis halleri to metalliferous soils. **2018**, 8, 16085		15
657	Harnessing Rhizobia to Improve Heavy-Metal Phytoremediation by Legumes. **2018**, 9,		45
656	Microbial-Assisted Phytoremediation: A Convenient Use of Plant and Microbes to Clean Up Soils. **2018**, 21-87		6
655	Phytoremediation in Waste Management: Hyperaccumulation Diversity and Techniques. **2018**, 277-302		7
654	Accumulation Status and Sources of Hg in Greenhouse Vegetable Production Systems. **2018**, 186, 012055		
653	An overview of field-scale studies on remediation of soil contaminated with heavy metals and metalloids: Technical progress over the last decade. **2018**, 147, 440-460		170
652	Nickel; whether toxic or essential for plants and environment - A review. **2018**, 132, 641-651		99
651	Using phytoremediation by decaying leaves and roots of reed (Phragmites austrates) plant uptake to treat polluted shallow groundwater in Kuwait. **2018**, 25, 34570-34582		5
650	Exogenous glutathione increased lead uptake and accumulation in Iris lactea var. chinensis exposed to excess lead. **2018**, 20, 1136-1143		1
649	Behavior of As, Cd, Co, Cr, Cu, Pb, Ni, and Zn at the soil/plant interface around an uncontrolled landfill (Casablanca, Morocco). **2018**, 28, 65-72		4
648	Increasing ammonium nutrition as a strategy for inhibition of cadmium uptake and xylem transport in rice (Oryza sativa L.) exposed to cadmium stress. **2018**, 155, 734-741		24
647	Sodium chloride decreases cadmium accumulation and changes the response of metabolites to cadmium stress in the halophyte Carpobrotus rossii. **2018**, 122, 373-385		18
646	Strategies for Rehabilitation of Mine Waste/Leachate in Thailand. **2018**, 617-643		0
645	Feasibility of Chinese cabbage (Brassica bara) and lettuce (Lactuca sativa) cultivation in heavily metals□ontaminated soil after washing with biodegradable chelators. **2018**, 197, 479-490		32
644	Interactive Effects of Lead and Nickel Contamination on Nickel Mobility Dynamics in Spinach. **2018**, 12, 553-560		11
643	Different dissolved organic matter (DOM) characteristics lead to diverse atrazine adsorption traits on the non-rhizosphere and rhizosphere soil of Pennisetum americanum (L.) K. Schum. **2018**, 209, 608-616		16
642	Investigation of heavy metal uptake by three types of ornamental plants as affected by application of organic and chemical fertilizers in contaminated soils. **2018**, 77, 1		7
641	Screening of native plants from wasteland surrounding a Zn smelter in Feng County China, for phytoremediation. *Ecotoxicology and Environmental Safety*, **2018**, 162, 178-183	7	34

640	Screening ornamental plants to identify potential Cd hyperaccumulators for bioremediation. *Ecotoxicology and Environmental Safety*, **2018**, 162, 35-41	7	53
639	Mechanistic understanding and holistic approach of phytoremediation: A review on application and future prospects. **2018**, 120, 274-298		191
638	Turn bane into a boon: Application of invasive plant species to remedy soil cadmium contamination. **2018**, 210, 1013-1020		31
637	An Evaluation of the Effectiveness of Sorbents in the Remediation of Soil Contaminated with Zinc. **2018**, 229, 235		7
636	Efficacy of EDTA and Olive Mill Wastewater to Enhance As, Pb, and Zn Phytoextraction by Pteris vittata L. from a Soil Heavily Polluted by Mining Activities. **2018**, 10, 1962		8
635	Land Eco-Security Assessment Based on the Multi-Dimensional Connection Cloud Model. **2018**, 10, 2096		9
634	Phytotoxicity of polymetallic mine wastes from southern Tuscany and Saxony. *Ecotoxicology and Environmental Safety*, **2018**, 162, 505-513	7	3
633	Energy Dispersive X-ray (EDX) microanalysis: A powerful tool in biomedical research and diagnosis. **2018**, 62, 2841		102
632	Cadmium reduces zinc uptake but enhances its translocation in the cadmium-accumulator, Carpobrotus rossii, without affecting speciation. **2018**, 430, 219-231		11
631	Amending potential of organic and industrial by-products applied to heavy metal-rich mining soils. *Ecotoxicology and Environmental Safety*, **2018**, 162, 581-590	7	23
630	Evaluation of amendment addition and tree planting as measures to remediate contaminated soils: The Guadiamar case study (SW Spain). **2018**, 166, 34-43		25
629	Long-term stability and risk assessment of copper and cadmium in a smelter-impacted soil treated by four amendments. **2018**, 34, 871-883		1
628	Arsenic forms in phytoextraction of this metalloid in organs of 2-year-old Acer platanoides seedlings. **2018**, 25, 27260-27273		13
627	Influence of the Flue Gas Temperature on the Behavior of Metals during Biomass Combustion. **2018**, 32, 7851-7856		4
626	Investigating the use of synthetic humic-like acid as a soil washing treatment for metal contaminated soil. **2019**, 647, 290-300		43
625	Biofuel Production Using Thermochemical Conversion of Heavy Metal-Contaminated Biomass (HMCB) Harvested from Phytoextraction Process. **2019**, 358, 759-785		57
624	Simultaneous determination of Cd(II) and Pb(II) ions in honey and milk samples using a single-walled carbon nanohorns modified screen-printed electrochemical sensor. **2019**, 274, 8-15		93
623	Salinity decreases Cd translocation by altering Cd speciation in the halophytic Cd-accumulator Carpobrotus rossii. **2019**, 123, 121-132		7

622	Effects of the combined pollution of cadmium, lead and zinc on the phytoextraction efficiency of ryegrass (L.).. **2019**, 9, 20603-20611		13
621	Oxidative stress mitigation and initiation of antioxidant and osmoprotectant responses mediated by ascorbic acid in Brassica juncea L. subjected to copper (II) stress. *Ecotoxicology and Environmental Safety*, **2019**, 182, 109436	7	21
620	Interaction between Cd and Zn on Metal Accumulation, Translocation and Mineral Nutrition in Tall Fescue (). **2019**, 20,		13
619	Effects of environmental governance in mining areas: The trend of arsenic concentration in the environmental media of a typical mining area in 25 years. **2019**, 235, 849-857		14
618	Strengthening role and the mechanism of optimum nitrogen addition in relation to Solanum nigrum L. Cd hyperaccumulation in soil. *Ecotoxicology and Environmental Safety*, **2019**, 182, 109444	7	18
617	Pyrolysis of heavy metal contaminated Avicennia marina biomass from phytoremediation: Characterisation of biomass and pyrolysis products. **2019**, 234, 1235-1245		40
616	Managing environmental contamination through phytoremediation by invasive plants: A review. **2019**, 138, 28-37		58
615	Safe Cultivation of in Metal-Polluted Soils from Semi-Arid Regions Assisted by Heat- and Metallo-Resistant PGPR. **2019**, 7,		33
614	The effects of rice husk ashes and inorganic fertilizers application rates on the phytoremediation of gold mine tailings by vetiver grass. **2019**, 108, 104366		8
613	Role of microorganisms in rehabilitation of mining sites, focus on Sub Saharan African countries. **2019**, 205, 106327		11
612	Phytoremediation of cadmium-contaminated soil by Sorghum bicolor and the variation of microbial community. **2019**, 235, 985-994		27
611	As, Cd, Cr, Cu, Hg: Physiological Implications and Toxicity in Plants. **2019**, 209-251		6
610	The Mechanism of Plant Resistance to Heavy Metal. **2019**, 310, 052004		14
609	A review on phytoremediation as an ecological method for in situ clean up of heavy metals contaminated soils. **2019**, 112, 03024		6
608	Heavy Metals and Photosynthesis: Recent Developments. **2019**, 107-134		12
607	191 Early weaning in pigs induces long-term alterations in intestinal nutrient transporter function and expression partially via beta adrenergic enteric neural receptors. **2019**, 97, 112-113		78
606	Chromium Hyper-Tolerant sp. MH778713 Assists Phytoremediation of Heavy Metals by Mesquite Trees (). **2019**, 10, 1833		26
605	cDNA Library for Mining Functional Genes in Hance Related to Cadmium Tolerance and Characterization of the Roles of a Novel Gene in Enhancing Cadmium Hyperaccumulation. **2019**, 53, 10926-10940		10

604	Metal-Contaminated Soil Remediation: Phytoremediation, Chemical Leaching and Electrochemical Remediation. **2019**,	4
603	Assisting Phytoremediation of Heavy Metals Using Chemical Amendments. **2019**, 8,	40
602	Rapid metal mobilisation through litter, water and bioweathering as the legacy of historical copper smelting. **2019**, 206, 106364	8
601	Influence of CaO-activated silicon-based slag amendment on the growth and heavy metal uptake of vetiver grass (Vetiveria zizanioides) grown in multi-metal-contaminated soils. **2019**, 26, 32243-32254	2
600	Deciphering the Symbiotic Plant Microbiome: Translating the Most Recent Discoveries on Rhizobia for the Improvement of Agricultural Practices in Metal-Contaminated and High Saline Lands. **2019**, 9, 529	21
599	Lead accumulation and soil microbial activity in the rhizosphere of the mining and non-mining ecotypes of Athyrium wardii (Hook.) Makino in adaptation to lead-contaminated soils. **2019**, 26, 32957-32966	1
598	Hazardous heavy metals contamination of vegetables and food chain: Role of sustainable remediation approaches - A review. **2019**, 179, 108792	128
597	Growth Responses and Accumulation Characteristics of Three Ornamentals Under Copper and Lead Contamination in a Hydroponic-Culture Experiment. **2019**, 103, 854-859	9
596	Microbe-Mediated Mitigation of Cadmium Toxicity in Plants. **2019**, 427-449	11
595	Phytoremediation of Cd-Contaminated Soil and Water. **2019**, 531-543	0
594	Cadmium in plants: uptake, toxicity, and its interactions with selenium fertilizers. **2019**, 11, 255-277	173
593	A critical review on bioremediation technologies for Cr(VI)-contaminated soils and wastewater. **2019**, 49, 1027-1078	171
592	Assessment of EDDS and vermicompost for the phytoextraction of Cd and Pb by sunflower (Helianthus annuus L.). **2019**, 21, 191-199	11
591	Suitability of aromatic plants for phytoremediation of heavy metal contaminated areas: a review. **2019**, 21, 405-418	53
590	Distribution of Cd and Cu Fractions in Chinese Soils and Their Relationships with Soil pH: A Meta-Analysis. **2019**, 11, 337	9
589	Effects of Vegetation Pattern and Spontaneous Succession on Remediation of Potential Toxic Metal-Polluted Soil in Mine Dumps. **2019**, 11, 397	9
588	Phytoextraction of heavy metals from contaminated soil, water and atmosphere using ornamental plants: mechanisms and efficiency improvement strategies. **2019**, 26, 8468-8484	81
587	Effect of temperature on heavy metal(loid) deportment during pyrolysis of Avicennia marina biomass obtained from phytoremediation. **2019**, 278, 214-222	38

586	Combining biochar and sewage sludge for immobilization of heavy metals in mining soils. *Ecotoxicology and Environmental Safety*, **2019**, 172, 326-333	7	88
585	Biochar effect associated with compost and iron to promote Pb and As soil stabilization and Salix viminalis L. growth. **2019**, 222, 810-822		51
584	Assessment of trace element and macronutrient accumulation capacity of two native plant species in three different Egyptian mine areas for remediation of contaminated soils. **2019**, 106, 105463		2
583	Physiological responses and accumulation characteristics of turfgrasses exposed to potentially toxic elements. **2019**, 246, 796-807		10
582	Evolution and functional differentiation of recently diverged phytochelatin synthase genes from Arundo donax L. **2019**, 70, 5391-5405		9
581	Technosols on mining wastes in the subarctic: Efficiency of remediation under Cu-Ni atmospheric pollution. **2019**, 7, 297-307		17
580	Nitrogen fertilizers promote plant growth and assist in manganese (Mn) accumulation by Blume cultured in Mn tailings soil. **2019**, 21, 1225-1233		5
579	XRD-Thermal Combined Analyses: An Approach to Evaluate the Potential of Phytoremediation, Phytomining, and Biochar Production. **2019**, 16,		8
578	Effects of biochar-immobilized bacteria on phytoremediation of cadmium-polluted soil. **2019**, 26, 23679-23688		29
577	The performance of biochar-microbe multiple biochemical material on bioremediation and soil micro-ecology in the cadmium aged soil. **2019**, 686, 719-728		42
576	Modified Rice Straw Enhanced Cadmium (II) Immobilization in Soil and Promoted the Degradation of Phenanthrene in Co-Contaminated Soil. **2019**, 20,		13
575	Effect of beeswax waste biochar on growth, physiology and cadmium uptake in saffron. **2019**, 229, 1251-1261		19
574	Insights into Heavy Metals Leakage in Chelator-Induced Phytoextraction of Pb- and Tl-Contaminated Soil. **2019**, 16,		11
573	The potential role of brassinosteroids (BRs) in alleviating antimony (Sb) stress in Arabidopsis thaliana. **2019**, 141, 51-59		26
572	Comparison of the feasibility of different washing solutions for combined soil washing and phytoremediation for the detoxification of cadmium (Cd) and zinc (Zn) in contaminated soil. **2019**, 230, 510-518		53
571	Novel Technologies for Developing Cadmium Tolerance. **2019**, 521-531		
570	Long-term phytoremediating abilities of Dalbergia sissoo Roxb. (Fabaceae). **2019**, 1, 1		3
569	Microbes-Assisted Remediation of Metal Polluted Soils. **2019**, 223-232		1

568	Arsenate phytoextraction abilities of one-year-old tree species and its effects on the nutritional element content in plant organs. **2019**, 21, 1019-1031		6
567	Reducing the Leachability and Bioaccessibility of Arsenic in Soils using Supported Nano Titanium Dioxide. **2019**, 28, 347-359		3
566	Comparative assessment of ′using Miscanthus ☐giganteus for remediation of soils contaminated by heavy metals: a case of military and mining sites. **2019**, 26, 13320-13333		21
565	Phytoremediation: Environmentally sustainable way for reclamation of heavy metal polluted soils. *Ecotoxicology and Environmental Safety*, **2019**, 174, 714-727	7	324
564	A transferable spectroscopic diagnosis model for predicting arsenic contamination in soil. **2019**, 669, 964-972		25
563	Nanomaterials for the abatement of cadmium (II) ions from water/wastewater. **2019**, 12, 1489-1507		38
562	Effects of typical modified passivators on speciation of heavy metals in protein extracted from sewage sludge. **2019**, 26, 10875-10886		3
561	Opportunities and Challenges for Biogas Development: a Review in 2013☐2018. **2019**, 5, 25-35		8
560	Evidence of the impacts of metal mining and the effectiveness of mining mitigation measures on social☐ecological systems in Arctic and boreal regions: a systematic map protocol. **2019**, 8,		19
559	Association between DNA damage, dietary patterns, nutritional status, and non-communicable diseases in coal miners. **2019**, 26, 15600-15607		8
558	Bioaccumulation and translocation of nine heavy metals by in Nile Delta, Egypt: perspectives for phytoremediation. **2019**, 21, 821-830		33
557	Emerging Trends and Tools in Transgenic Plant Technology for Phytoremediation of Toxic Metals and Metalloids. **2019**, 63-88		8
556	Phytoremediation of Heavy Metal-Contaminated Sites: Eco-environmental Concerns, Field Studies, Sustainability Issues, and Future Prospects. **2020**, 249, 71-131		72
555	Transgenics in Phytoremediation of Metals and Metalloids: From Laboratory to Field. **2019**, 3-22		4
554	Transgenic Plants. **2019**, 89-102		13
553	Heavy metals in food crops: Health risks, fate, mechanisms, and management. **2019**, 125, 365-385		553
552	Mercury accumulation and biotransportation in wetland biota affected by gold mining. **2019**, 191, 186		11
551	Effects of micro-/nano-hydroxyapatite and phytoremediation on fungal community structure in copper contaminated soil. *Ecotoxicology and Environmental Safety*, **2019**, 174, 100-109	7	21

550	Impact of double inoculation with Bradyrhizobium japonicum E109 and Azospirillum brasilense Az39 on soybean plants grown under arsenic stress. **2019**, 138, 26-35		26
549	Uptake and Fractionation of Thallium by Brassica juncea in a Geogenic Thallium-Amended Substrate. **2019**, 53, 2441-2449		20
548	The impact of nanoparticles zero-valent iron (nZVI) and rhizosphere microorganisms on the phytoremediation ability of white willow and its response. **2019**, 26, 10776-10789		40
547	The potential of an energy crop "Conocarpus erectus" for lead phytoextraction and phytostabilization of chromium, nickel, and cadmium: An excellent option for the management of multi-metal contaminated soils. *Ecotoxicology and Environmental Safety*, **2019**, 173, 273-284	7	28
546	Phytoremediation as a Sustainable Way for Land Rehabilitation of Heavy Metal Contamination. **2019**, 1381, 012062		2
545	Effective plant-endophyte interplay can improve the cadmium hyperaccumulation in Brachiaria mutica. **2019**, 35, 188		10
544	A critical review on environmental implications, recycling strategies, and ecological remediation for mine tailings. **2019**, 26, 35657-35669		38
543	Mining environments. **2019**, 4, 157-205		5
542	Phytoremediation of barium-affected flooded soils using single and intercropping cultivation of aquatic macrophytes. **2019**, 214, 10-16		11
541	Removal of toxic pollutants from water environment by phytoremediation: A survey on application and future prospects. **2019**, 13, 264-276		106
540	Accumulation of heavy metals in metallophytes from three mining sites (Southern Centre Morocco) and evaluation of their phytoremediation potential. *Ecotoxicology and Environmental Safety*, **2019**, 169, 150-160	7	43
539	The potential of a Technosol and tropical native trees for reclamation of copper-polluted soils. **2019**, 220, 892-899		14
538	Soil nutrient heterogeneity affects the accumulation and transfer of cadmium in Bermuda grass (Cynodon dactylon (L.) pers.). **2019**, 221, 342-348		14
537	Assessing germination characteristics of Australian native plant species in metal/metalloid solution. **2019**, 364, 173-181		9
536	Pollution assessment of heavy metals in soils of India and ecological risk assessment: A state-of-the-art. **2019**, 216, 449-462		185
535	Influence of alkaline silicon-based amendment and incorporated with biochar on the growth and heavy metal translocation and accumulation of vetiver grass (Vetiveria zizanioides) grown in multi-metal-contaminated soils. **2019**, 19, 2277-2289		9
534	Modelling on the removal of Cr(VI) ions from aquatic system using mixed biosorbent (Pseudomonas stutzeri and acid treated Banyan tree bark). **2019**, 276, 362-370		27
533	Progresses in restoration of post-mining landscape in Africa. **2019**, 30, 381-396		66

532	Optimisation of the removal conditions for heavy metals from water: A comparison between steel furnace slag and CeO2 nanoparticles. **2020**, 13, 1712-1719	10
531	Emerging and Ecofriendly Technologies for the Removal of Organic and Inorganic Pollutants from Industrial Wastewaters. **2020**, 113-126	3
530	Recent Advances in Phytoremediation of Toxic Metals from Contaminated Sites: A Road Map to a Safer Environment. **2020**, 77-112	1
529	Ornamental Plant Cultivation Using Vermiculite-Lizardite Mining Waste in the Industrial Zone of the Subarctic. **2020**, 199-204	1
528	Phytoextraction of cadmium-contaminated soils: comparison of plant species and low molecular weight organic acids. **2020**, 22, 383-391	17
527	Interactions between nitrogen application and soil properties and their impacts on the transfer of cadmium from soil to wheat (Triticum aestivum L.) grain. **2020**, 357, 113923	21
526	Curing the earth: A review of anthropogenic soil salinization and plant-based strategies for sustainable mitigation. **2020**, 698, 134235	77
525	The effects of ectomycorrhizal fungi on heavy metals' transport in Pinus massoniana and bacteria community in rhizosphere soil in mine tailing area. **2020**, 381, 121203	35
524	Ultrafast remediation of lead-contaminated water applying sphagnum peat moss by dispersive solid-phase extraction. **2020**, 77, 382-397	2
523	Growth and accumulation of Pb by roots and shoots of L. **2020**, 22, 134-139	15
522	Introduction to Industrial Wastes Containing Organic and Inorganic Pollutants and Bioremediation Approaches for Environmental Management. **2020**, 1-18	16
521	Modeling and Cr(VI) ion uptake kinetics of Sorghum bicolor plant assisted by plant growth-promoting Pannonibacter phragmetitus: an ecofriendly approach. **2020**, 27, 27307-27318	4
520	A novel evaluation model for heavy-metals pollution in soil based on connection numbers and Dempster–Shafer theory. **2020**, 17, 541-552	0
519	Phytomanagement in Egypt: A Sustainable Approach for Clean Environment Coupled with Meeting Future Energy Demand. **2020**, 93-109	2
518	Nitrogen fertilizer enhances zinc and cadmium uptake by hyperaccumulator Sedum alfredii Hance. **2020**, 20, 320-329	14
517	Differentiation of Nanoparticles Isolated from Distinct Plant Species Naturally Growing in a Heavy Metal Polluted Site. **2020**, 386, 121644	8
516	Potential of enhancing the phytoremediation efficiency of L. by earthworms. **2020**, 22, 529-533	3
515	Bioavailability and mobility of copper and cadmium in polluted soil after phytostabilization using different plants aided by limestone. **2020**, 242, 125252	34

514	The effects of exogenous organic acids on the growth, photosynthesis and cellular ultrastructure of Salix variegata Franch. Under Cd stress. *Ecotoxicology and Environmental Safety*, **2020**, 187, 109790	7	24
513	Cadmium absorption and translocation of amaranth (Amaranthus mangostanus L.) affected by iron deficiency. **2020**, 256, 113410		18
512	Evaluation of Vetiver Grass Uptake Efficiency in Single and Mixed Heavy Metal Contaminated Soil. **2020**, 7, 207-226		6
511	Effects of melatonin-treated Nasturtium officinale on the growth and cadmium accumulation of subsequently grown rice seedlings. **2020**, 1-9		2
510	Crop suitability assessment in remediation of Zn contaminated soil. **2020**, 246, 125706		14
509	Appraising growth, oxidative stress and copper phytoextraction potential of flax (Linum usitatissimum L.) grown in soil differentially spiked with copper. **2020**, 257, 109994		79
508	Helping stakeholders select and apply appraisal tools to mitigate soil threats: Researchers' experiences from across Europe. **2020**, 257, 110005		9
507	Arbuscular mycorrhizal fungi alter carbohydrate distribution and amino acid accumulation in Medicago truncatula under lead stress. **2020**, 171, 103950		13
506	Rhizoremediation □A promising tool for the removal of soil contaminants: A review. **2020**, 8, 103543		28
505	Naturally selected dominant weeds as heavy metal accumulators and excluders assisted by rhizosphere bacteria in a mining area. **2020**, 243, 125365		14
504	The potential of elm trees (Ulmus glabra Huds.) for the phytostabilisation of potentially toxic elements in the riparian zone of the Sava River. **2020**, 27, 4309-4324		4
503	Effects of root exudates on the activation and remediation of cadmium ion in contaminated soils. **2020**, 27, 2926-2934		6
502	Influence of nitrogen forms and application rates on the phytoextraction of copper by castor bean (Ricinus communis L.). **2020**, 27, 647-656		6
501	The risk and phytotoxicity of metal(loid)s in the sediment, floodplain soil, and hygrophilous grasses along Le□n River. **2020**, 17, 1963-1974		3
500	Foliar application of 24-epibrassinolide improves Solanum nigrum L. tolerance to high levels of Zn without affecting its remediation potential. **2020**, 244, 125579		5
499	Soil pollution characteristics and systemic environmental risk assessment of a large-scale arsenic slag contaminated site. **2020**, 251, 119721		18
498	Effect of arsenic on legumes: analysis in the model Medicago truncatula□nsifer interaction. **2020**, 268-280		0
497	Optimization of NPK fertilization combined with phytoremediation of cadmium contaminated soil by orthogonal experiment. *Ecotoxicology and Environmental Safety*, **2020**, 189, 109997	7	23

496	Phytoremediation for E-waste contaminated sites. **2020**, 141-170		4
495	Application of chemical and biological tests for estimation of current state of a tailing dump and surrounding soil from the region of Tarni, Suceava, Romania. **2020**, 27, 1386-1396		3
494	Risk analysis by bioaccumulation of Cr, Cu, Ni, Pb and Cd from wastewater-irrigated soil to Brassica species. **2020**, 17, 2889-2906		5
493	Rapid ratiometric detection of Cd based on the formation of ZnSe/CdS quantum dots. **2020**, 228, 117795		6
492	Biochar-assisted phytoextraction of Cd and Zn by Noccaea caerulescens on a contaminated soil: A four-year lysimeter study. **2020**, 707, 135654		8
491	The combined effects of Cd and Pb enhanced metal binding by root cell walls of the phytostabilizer Athyrium wardii (Hook.). **2020**, 258, 113663		20
490	Accumulation and distribution of cadmium and lead in 28 oilseed rape cultivars grown in a contaminated field. **2020**, 27, 2400-2411		4
489	Transport and transformation of uranium and heavy metals from uranium tailings under simulated rain at different pH. **2020**, 18, 495-503		6
488	Agronomic Approaches for Characterization, Remediation, and Monitoring of Contaminated Sites. **2020**, 10, 1335		12
487	Legacy iron and steel wastes in the UK: Extent, resource potential, and management futures. **2020**, 219, 106630		8
486	Copper and mercury induced oxidative stresses and antioxidant responses of (L.) Schleid. **2020**, 23, 100781		12
485	An algal biostimulant promotes growth and decreases cadmium uptake in accumulator plant Nasturtium officinale. **2020**, 1-9		2
484	Phosphate: Coupling the functions of fertilization and passivation in phytoremediation of manganese-contaminated soil by Polygonum pubescens blume. **2020**, 260, 127651		8
483	Elucidating the differentiation of soil heavy metals under different land uses with geographically weighted regression and self-organizing map. **2020**, 260, 114065		38
482	Effects of low molecular weight organic acids on Cu accumulation by castor bean and soil enzyme activities. *Ecotoxicology and Environmental Safety*, **2020**, 203, 110983	7	11
481	Recycling of leather industrial sludge through vermitechnology for a cleaner environment: A review. **2020**, 155, 112791		12
480	Morphological, physiological, and genotoxic effects of heavy metal bioaccumulation in Prosopis laevigata reveal its potential for phytoremediation. **2020**, 27, 40187-40204		12
479	Search for autochthonous plants as accumulators and translocators in a toxic metal-polluted coal mine soil in Okaba, Nigeria. **2020**, 10, e00630		1

478	Application Research of Biochar for the Remediation of Soil Heavy Metals Contamination: A Review. **2020**, 25,	36
477	Interactions of cadmium and zinc in high zinc tolerant native species Andropogon gayanus cultivated in hydroponics: growth endpoints, metal bioaccumulation, and ultrastructural analysis. **2020**, 27, 45513-45526	6
476	The outcomes of the functional interplay of nitric oxide and hydrogen sulfide in metal stress tolerance in plants. **2020**, 155, 523-534	17
475	Potential use of king grass (Pennisetum purpureum Schumach. Pennisetum glaucum (L.) R.Br.) for phytoextraction of cadmium from fields. **2020**, 27, 35249-35260	5
474	Phytoremediation of Soil Contaminated with Lithium Ion Battery Active Materials A Proof-of-Concept Study. **2020**, 5, 26	4
473	Recovery of Iron Nanoparticles from Mine Wastewater Using Plant Extracts of Eucalyptus Globulus, Callistemon Viminalis and Persea Americana. **2020**, 10, 859	
472	Remediation of a metal-contaminated soil by chemical washing and repeated phytoextraction: a field experiment. **2021**, 23, 577-584	4
471	Phytostabilization of store-and-release cover made with phosphate mine wastes in arid and semiarid climate using wild local plants. **2020**, 31, 105-122	3
470	Monitoring the Efficiency of L. Plants in Phytoremediation of Heavy Metal-Contaminated Soil. **2020**, 9,	13
469	Response of Leafy Vegetable to Cadmium in the Soil. **2020**, 9,	2
468	Invisible contaminants and food security in former coal mining areas of Santa Catarina, Southern Brazil. **2020**, 16, 44	2
467	Morphophysiological responses, bioaccumulation and tolerance of Alternanthera tenella Colla (Amaranthaceae) to excess copper under in vitro conditions. **2020**, 143, 303-318	6
466	Dendroremediation of Metal and Metalloid Elements with Poplar and Willow in the Floodplain Area Downstream a Mining Hill, Tongling, China. **2020**, 453, 012026	1
465	Identification and functional characterization of ABCC transporters for Cd tolerance and accumulation in Sedum alfredii Hance. **2020**, 10, 20928	6
464	Effects of Hyperaccumulator Sedum Plumbizincicola Intercropped With Maize and Castor on Soil Microbes and Enzyme Activities under Field Conditions. **2020**, 1549, 022028	
463	Guidelines for a phytomanagement plan by the phytostabilization of mining wastes. **2020**, 10, e00654	10
462	Removal of selected heavy metals and metalloids from an artisanal gold mining site in Ghana using indigenous plant species. **2020**, 6, 1840863	6
461	Screening of Native Plants Growing on a Pb/Zn Mining Area in Eastern Morocco: Perspectives for Phytoremediation. **2020**, 9,	13

460	Growth Performance of Jatropha curcas Cultivated on Local Abandoned Bauxite Mine Soil. **2020**, 12, 8263	0
459	Using bioenergy crop cassava () for reclamation of heavily metal-contaminated land. **2020**, 22, 1313-1320	4
458	Analysis of Selected Heavy Metals in Tap Water by Inductively Coupled Plasma-Optical Emission Spectrometry After Pre-Concentration Using Chelex-100 Ion Exchange Resin. **2020**, 231, 1	10
457	Phytoremediation: A Promising Approach for Revegetation of Heavy Metal-Polluted Land. **2020**, 11, 359	245
456	Genotypic variation in growth and lead accumulation among accessions. **2020**, 22, 1249-1258	2
455	Role of textile effluent fertilization with biosurfactant to sustain soil quality and nutrient availability. **2020**, 268, 110664	10
454	Antimony-oxidizing bacteria alleviate Sb stress in Arabidopsis by attenuating Sb toxicity and reducing Sb uptake. **2020**, 452, 397-412	9
453	Assessing potential of weeds (Acalypha indica and Amaranthus viridis) in phytoremediating soil contaminated with heavy metals-rich effluent. **2020**, 2, 1	3
452	Unraveling response mechanism of photosynthetic metabolism and respiratory metabolism to uranium-exposure in Vicia faba. **2020**, 398, 122997	13
451	Assessment of Alternanthera sessilis and Aster philippinensis as excluders in a small-scale Cu-Au processing site at Kias, Benguet, Philippines. **2020**, 192, 402	
450	Bioremediation of co-contaminated soil with heavy metals and pesticides: Influence factors, mechanisms and evaluation methods. **2020**, 398, 125657	90
449	Trace element accumulation potential in lemongrass varieties (Cymbopogon species) and prediction through regression model equations followed by path analysis: a field study. **2020**, 257, 127102	1
448	Alta presencia de cadmio resulta en baja diversidad de hongos formadores de micorrizas arbusculares asociados a cacao (Theobroma cacao L.). **2020**, 25, 333-344	3
447	Phytoremediation□ holistic approach for remediation of heavy metals and metalloids. **2020**, 3-16	2
446	Deciphering the rhizosphere microbiome of a bamboo plant in response to different chromium contamination levels. **2020**, 399, 123107	11
445	Comparison of Myagrum perfoliatum and Sophora alopecuroides in phytoremediation of Cd- and Pb-contaminated soils: A chemical and biological investigation. **2020**, 259, 127450	4
444	Factors influencing heavy metal availability and risk assessment of soils at typical metal mines in Eastern China. **2020**, 400, 123289	60
443	Study of Toxicity Assessment of Heavy Metals from Steel Slag and Its Asphalt Mixture. **2020**, 13,	14

442	Foliar application of gibberellic acid endorsed phytoextraction of copper and alleviates oxidative stress in jute (Corchorus capsularis L.) plant grown in highly copper-contaminated soil of China. **2020**, 27, 37121-37133		28
441	Preliminary study on Cd accumulation characteristics in Prain. **2020**, 42, 351-355		5
440	Lead Tolerance and Enrichment Characteristics of Several Ornamentals Under Hydroponic Culture. **2020**, 105, 166-172		3
439	Removal of heavy metals from urban soil using functionalized carbon-coated composite. **2020**, 17, 4787-4802		2
438	Nickel tolerance, translocation and accumulation in a Cd/Zn co-hyperaccumulator plant Sedum alfredii. **2020**, 398, 123074		8
437	Soil quality indices for metal(loid) contamination: An enzymatic perspective. **2020**, 31, 2700-2719		18
436	Co-remediation of Pb Contaminated Soils by Heat Modified Sawdust and Festuca arundinacea. **2020**, 10, 4663		5
435	Localization of mercury and gold in cassava (Manihot esculenta Crantz). **2020**, 27, 18498-18509		5
434	Nanotechnology and remediation of agrochemicals. **2020**, 487-533		1
433	Phytostabilization of Cd and Pb in Highly Polluted Farmland Soils Using Ramie and Amendments. **2020**, 17,		14
432	Application of Festuca arundinacea in phytoremediation of soils contaminated with Pb, Ni, Cd and petroleum hydrocarbons. *Ecotoxicology and Environmental Safety*, **2020**, 194, 110409	7	34
431	Mobility of metal(loid)s in Pb/Zn tailings under different revegetation strategies. **2020**, 263, 110323		5
430	Microbe-Assisted Phytoremediation in Reinstating Heavy Metal-Contaminated Sites: Concepts, Mechanisms, Challenges, and Future Perspectives. **2020**, 161-189		6
429	Application of Floating Aquatic Plants in Phytoremediation of Heavy Metals Polluted Water: A Review. **2020**, 12, 1927		107
428	Hydrogen sulfide mediated alleviation of cadmium toxicity in L. and establishment of a comprehensive evaluation model for corresponding strategy. **2020**, 22, 1085-1095		6
427	Integrated and Sustainable Management of Post-industrial Coasts. **2020**, 8,		12
426	Dealing with Lead in Hybrid Perovskite: A Challenge to Tackle for a Bright Future of This Technology?. **2020**, 10, 2001471		28
425	Characterization of dissolved organic matter in the rhizosphere of phytostabilizer Athyrium wardii (Hook.) involved in enhanced metal accumulation when exposed to Cd and Pb co-contamination. **2020**, 266, 115196		7

424	Bioremediation of Cd-contaminated soil by earthworms (Eisenia fetida): Enhancement with EDTA and bean dregs. **2020**, 266, 115191		10
423	A four-year phytoremediation trial to decontaminate soil polluted by wood preservatives: phytoextraction of arsenic, chromium, copper, dioxins and furans. **2020**, 22, 1505-1514		4
422	Accumulation of Heavy Metals and As in the Fern Blechnum orientale L. from Guangdong Province, Southern China. **2020**, 231, 1		0
421	Urea application enhances cadmium uptake and accumulation in Italian ryegrass. **2020**, 27, 34421-34433		4
420	Jute: A Potential Candidate for Phytoremediation of Metals-A Review. **2020**, 9,		60
419	Effect of three Napier grass varieties on phytoextraction of Cd- and Zn-contaminated cultivated soil under mowing and their safe utilization. **2020**, 27, 16134-16144		7
418	From classic methodologies to application of nanomaterials for soil remediation: an integrated view of methods for decontamination of toxic metal(oid)s. **2020**, 27, 10205-10227		19
417	Rhizoremediation of Cu(II) ions from contaminated soil using plant growth promoting bacteria: an outlook on pyrolysis conditions on plant residues for methylene orange dye biosorption. **2020**, 11, 175-187		11
416	The knowledge domain and emerging trends in phytoremediation: a scientometric analysis with CiteSpace. **2020**, 27, 15515-15536		20
415	Modelling assisted phytoremediation of soils contaminated with heavy metals - Main opportunities, limitations, decision making and future prospects. **2020**, 249, 126196		29
414	Re-investigation of cadmium accumulation in Mirabilis jalapa L.: evidences from field and laboratory. **2020**, 27, 12065-12079		3
413	EDTA-enhanced phytoremediation of heavy metals from sludge soil by Italian ryegrass (Lolium perenne L.). *Ecotoxicology and Environmental Safety*, **2020**, 191, 110185	7	22
412	Accumulation and partitioning of metals and metalloids in the halophytic saltmarsh grass, saltwater couch, Sporobolus virginicus. **2020**, 713, 136576		12
411	Salinity influences Cd accumulation and distribution characteristics in two contrasting halophytes, Suaeda glauca and Limonium aureum. *Ecotoxicology and Environmental Safety*, **2020**, 191, 110230	7	11
410	Heavy metal bioaccumulation and morphological changes in Vachellia campechiana (Fabaceae) reveal its potential for phytoextraction of Cr, Cu, and Pb in mine tailings. **2020**, 27, 11260-11276		4
409	NTA-enhanced Pb remediation efficiency by the phytostabilizer Athyrium wardii (Hook.) and associated Pb leaching risk. **2020**, 246, 125815		10
408	Arsenic accumulation by red fescue (Festuca rubra) growing in mine affected soils - Findings from the field and greenhouse studies. **2020**, 248, 126045		13
407	iTRAQ-Based Comparative Proteomic Analysis of ADP1 Under DNA Damage in Relation to Different Carbon Sources. **2019**, 10, 2906		1

406	Development of Visible/Near-Infrared Hyperspectral Imaging for the Prediction of Total Arsenic Concentration in Soil. **2020**, 10, 2941		2
405	Effects of sewage sludge supplementation on heavy metal accumulation and the expression of ABC transporters in Sinapis alba L. during assisted phytoremediation of contaminated sites. *Ecotoxicology and Environmental Safety*, **2020**, 197, 110606	7	12
404	Significance Assessment of Amphora coffeaeformis in Arsenic-Induced Hemato- Biochemical Alterations of African Catfish (Clarias gariepinus). **2020**, 7,		8
403	Investigation of plant species and their heavy metal accumulation in manganese mine tailings in Pingle Mn mine, China. **2020**, 27, 19933-19945		11
402	Energy potential of agricultural residues generated in Mexico and their use for butanol and electricity production under a biorefinery configuration. **2020**, 27, 28607-28622		13
401	Heavy metal mobility in surface water and soil, climate change, and soil interactions. **2020**, 51-88		5
400	Phytoremediation: A multidisciplinary approach to clean up heavy metal contaminated soil. **2020**, 18, 100774		120
399	Potentially toxic element contamination of arid and semi-arid soils and its phytoremediation. **2020**, 34, 361-391		12
398	Effect of Citric Acid on Growth, Ecophysiology, Chloroplast Ultrastructure, and Phytoremediation Potential of Jute (L.) Seedlings Exposed to Copper Stress. **2020**, 10,		47
397	Flax L.): A Potential Candidate for Phytoremediation? Biological and Economical Points of View. **2020**, 9,		48
396	Cadmium and Mercury phytostabilization from soil using Miscanthus giganteus. **2020**, 10, 6685		33
395	Effects of EDTA, citric acid, and tartaric acid application on growth, phytoremediation potential, and antioxidant response of L. in a cadmium-spiked calcareous soil. **2020**, 22, 1204-1214		14
394	Plantago lanceolata L. from Serpentine Soils in Central Bosnia Tolerates High Levels of Heavy Metals in Soil. **2020**, 231, 1		7
393	Growing food in polluted soils: A review of risks and opportunities associated with combined phytoremediation and food production (CPFP). **2020**, 254, 126826		24
392	Physiological and molecular mechanism of cadmium (Cd) tolerance at initial growth stage in rapeseed (Brassica napus L.). *Ecotoxicology and Environmental Safety*, **2020**, 197, 110613	7	13
391	Comprehensive review of the basic chemical behaviours, sources, processes, and endpoints of trace element contamination in paddy soil-rice systems in rice-growing countries. **2020**, 397, 122720		48
390	A Cd/Zn Co-hyperaccumulator and Pb accumulator, Sedum alfredii, is of high Cu tolerance. **2020**, 263, 114401		17
389	Biomass valorization and phytoremediation as integrated Technology for Municipal Solid Waste Management for developing economic context. **2021**, 11, 363-382		4

388	Organic matter accumulation by alkaline-constructed soils in heavily metal-polluted area of Subarctic zone. **2021**, 21, 2071-2088		7
387	Influence of mycorrhiza and fly ash on the survival, growth and heavy metal accumulation in three Acacia species grown in Cu-Ni mine soil. **2021**, 43, 1337-1353		6
386	About plant species potentially promising for phytoextraction of large amounts of toxic trace elements. **2021**, 43, 1689-1701		1
385	Metal remediation potential of naturally occurring plants growing on barren fly ash dumps. **2021**, 43, 1415-1426		11
384	Porous media transport of iron nanoparticles for site remediation application: A review of lab scale column study, transport modelling and field-scale application. **2021**, 403, 123443		16
383	Redistribution of calcium and sodium in calcareous soil profile and their effects on copper and lead uptake: A poplar-based phytomanagement. **2021**, 755, 142535		0
382	Metal type and aggregate microenvironment govern the response sequence of speciation transformation of different heavy metals to microplastics in soil. **2021**, 752, 141956		27
381	Cadmium level and soil type played a selective role in the endophytic bacterial community of hyperaccumulator Sedum alfredii Hance. **2021**, 263, 127986		5
380	Hydrogen production and heavy metal immobilization using hyperaccumulators in supercritical water gasification. **2021**, 402, 123541		21
379	Biomass allocation strategies and Pb-enrichment characteristics of six dwarf bamboos under soil Pb stress. *Ecotoxicology and Environmental Safety*, **2021**, 207, 111500	7	5
378	Strategies to address coal mine-created environmental issues and their feasibility study on northeastern coalfields of Assam, India: a review. **2021**, 23, 9667-9709		2
377	Cadmium phytoextraction by Helianthus annuus (sunflower), Brassica napus cv Wichita (rapeseed), and Chyrsopogon zizanioides (vetiver). **2021**, 265, 129086		9
376	Evaluating the environmental and economic impact of mining for post-mined land restoration and land-use: A review. **2021**, 279, 111623		28
375	In situ phytoremediation of heavy metal-contaminated soil and groundwater: a green inventive approach. **2021**, 28, 4104-4124		4
374	Dynamic zinc and potassium release from a burning hyperaccumulator pellet and their interactions with inhibitive additives. **2021**, 286, 119365		3
373	Current knowledge from heavy metal pollution in Chinese smelter contaminated soils, health risk implications and associated remediation progress in recent decades: A critical review. **2021**, 286, 124989		43
372	Leaching behavior of copper and chromium in the mortar containing artificial fine aggregate prepared by contaminated soil. **2021**, 270, 121367		3
371	Nanoscale zerovalent iron, carbon nanotubes and biochar facilitated the phytoremediation of cadmium contaminated sediments by changing cadmium fractions, sediments properties and bacterial community structure. *Ecotoxicology and Environmental Safety*, **2021**, 208, 111510	7	14

370	Status and associated human health risk of zinc accumulation in agricultural soils across China. **2021**, 146, 867-876	3
369	Concept and types of bioremediation. **2021**, 3-8	4
368	The use of industrial and food crops for the rehabilitation of areas contaminated with metal(loid)s: Physiological and molecular mechanisms of tolerance. **2021**, 9-21	
367	Phytomanagement of As-contaminated matrix: Physiological and molecular basis. **2021**, 61-79	20
366	Recent advances in phytoremediation of heavy metals-contaminated soils: a review. **2021**, 23-41	1
365	In situ plant bionic remediation of cadmium-contaminated soil caused by a high geological background in Kaihua, Zhejiang Province, China. **2021**, 269, 128693	3
364	Phytoremediation potential of Echinochloa crus galli and Hibiscus cannabinus in the stabilization of municipal wastewater sludge. **2021**, 18, 2137-2144	2
363	Bio-remediation approaches for alleviation of cadmium contamination in natural resources. **2021**, 268, 128855	48
362	Extracting cadmium in the presence of salt: a study on three poplar clones under controlled conditions. **2021**, 28, 1040-1051	
361	Role of metal-binding proteins and peptides in bioremediation of toxic metals. **2021**, 437-444	
360	Rhizosphere properties and heavy metal accumulation of plants growing in the fly ash dumpsite, Morupule power plant, Botswana. **2021**, 28, 20637-20649	4
359	Mapping leaf metal content over industrial brownfields using airborne hyperspectral imaging and optimized vegetation indices. **2021**, 11, 2	4
358	Enhanced ciprofloxacin removal by plant growth-promoting Microbacterium sp. WHC1 in presence of Eichhornia crassipes root exudates. **2021**, 4, 143-153	2
357	Phytomining: a sustainable approach for recovery and extraction of valuable metals. **2021**, 487-506	0
356	Effects of UV-modified biochar derived from phytoremediation residue on Cd bioavailability and uptake in Coriandrum sativum L. in a Cd-contaminated soil. **2021**, 28, 17395-17404	3
355	Alleviation of Cadmium Toxicity to Medicago Truncatula by AMF Involves the Changes of Cd Speciation in Rhizosphere Soil and Subcellular Distribution. **2021**, 90, 403-415	2
354	Bioremediation of Waste Gases and Polluted Soils. **2021**, 111-137	7
353	Heavy metal removal by nanobiotechnology. **2021**, 235-252	0

352	Metals Phytoextraction by Brassica Species. **2021**, 361-384		2
351	Genetics of metal hyperaccumulation in plants. **2021**, 329-340		
350	Phytoremediation of abandoned mining areas for land restoration: Approaches and technology. **2021**, 33-56		1
349	Harnessing the Potential of Microbes for Rejuvenating Soils from Mining Sites: An Initiative for Environmental Balance and Value Addition. **2021**, 149-181		
348	Potential amendments for improving productivity of low carbon semiarid soil. **2021**, 4, e20171		
347	Plant gasotransmitters: light molecules interplaying with heavy metals. **2021**, 20, 31-53		1
346	Bioremediation and Phytoremediation. **2021**, 38-64		
345	Evaluation of Cadmium Accumulation and its activity in Northeast China. 657, 012108		
344	Phytoremediation of Heavy Metals in Tropical Soils an Overview. **2021**, 13, 2574		7
343	Ion-Imprinted Polymers: Synthesis, Characterization, and Adsorption of Radionuclides. **2021**, 14,		14
342	Bioremediation of Heavy Metal Ions Contaminated Soil. **2021**, 87-114		
341	Cd accumulation characteristics of Salvia tiliifolia and changes of rhizospheric soil enzyme activities and bacterial communities under a Cd concentration gradient. **2021**, 463, 225-247		5
340	Rhizobacteria-Mediated Bioremediation. **2021**, 193-211		2
339	Use of Comparative Transcriptomics Combined With Physiological Analyses to Identify Key Factors Underlying Cadmium Accumulation in L. **2021**, 12, 655885		4
338	Silicon reduces cadmium absorption and increases root-to-shoot translocation without impacting growth in young plants of hemp (Cannabis sativa L.) on a short-term basis. **2021**, 28, 37963-37977		2
337	Use of seed priming to improve Cd accumulation and tolerance in Silene sendtneri, novel Cd hyper-accumulator. *Ecotoxicology and Environmental Safety*, **2021**, 210, 111882	7	6
336	Bioremediation of Heavy Metals and Other Toxic Substances by Microorganisms. **2021**, 285-329		4
335	Phytoremediation. **2021**, 67-94		1

334	Bioaugmented Phytoremediation of Metal-Contaminated Soils and Sediments by Hemp and Giant Reed. **2021**, 12, 645893	9
333	Characterization of copper slag for beneficiation of iron and copper. **2021**, 7, e06757	5
332	Effects of heavy metals on physiological status for Schoenoplectus litoralis & Salvinia natans L. **2021**, 722, 012012	
331	Dynamic Transformations of Metals in the Burning Solid Matter during Combustion of Heavy Metal-Contaminated Biomass. **2021**, 9, 7063-7073	1
330	Influence mechanism of heavy metal removal under microcurrent action. **2021**, 263, 118351	0
329	Safe, efficient, and economically beneficial remediation of arsenic-contaminated soil: possible strategies for increasing arsenic tolerance and accumulation in non-edible economically important native plants. **2021**, 28, 64113-64129	3
328	Insights into decontamination of soils by phytoremediation: A detailed account on heavy metal toxicity and mitigation strategies. **2021**, 173, 287-304	5
327	Effect of Poultry Manure Compost and Arbuscular Mycorrhizal Fungi on Cu Immobilization and Soil Microbial Communities in a Cu-Contaminated Soil Using the Metallophyte Oenothera Picensis. **2021**, 21, 1957-1967	0
326	Phytomining of valuable metals: status and prospective-a review. 1-21	1
325	Assessment of the Accumulation Ability of Festuca rubra L. and Alyssum saxatile L. Tested on Soils Contaminated with Zn, Cd, Ni, Pb, Cr, and Cu. **2021**, 10, 46	5
324	Molecular characterization of leaf spot caused by Alternaria alternata on buttonwood (Conocarpus erectus L.) and determination of pathogenicity by a novel disease rating scale. **2021**, 16, e0251471	4
323	Plant-assisted metal remediation in mine-degraded land: a scientometric review. 1	0
322	Microbe and Plant-Assisted Remediation of Organic Xenobiotics. **2021**, 437-475	
321	Effects of co-pyrolysis of heavy metal contaminated biomass with magnesium carbonate on heavy metal deportment and pyrolytic product properties. **2021**, 294, 120545	7
320	Abandoned Mine Lands Reclamation by Plant Remediation Technologies. **2021**, 13, 6555	8
319	Compounded chelating agent derived from fruit residue extracts effectively enhances Cd phytoextraction by Sedum alfredii. **2021**, 3, 253	2
318	Exogenous application of Mn significantly increased Cd accumulation in the Cd/Zn hyperaccumulator Sedum alfredii. **2021**, 278, 116837	4
317	Multivariate statistical analysis of potentially toxic elements in soils under different land uses: Spatial relationship, ecological risk assessment, and source identification. **2021**, 1	1

316	Phytoremediation Perspectives of Seven Aquatic Macrophytes for Removal of Heavy Metals from Polluted Drains in the Nile Delta of Egypt. **2021**, 10,		3
315	The Role of Indoor Plants in air Purification and Human Health in the Context of COVID-19 Pandemic: A Proposal for a Novel Line of Inquiry. **2021**, 8, 709395		3
314	Effects of Vegetation Restoration on Soil Enzyme Activity in Copper and Coal Mining Areas. **2021**, 68, 366-376		1
313	Changes in the Structures and Directions of Heavy Metal-Contaminated Soil Remediation Research from 1999 to 2020: A Bibliometric & Scientometric Study. **2021**, 18,		3
312	Synergistic anti-oxidative effects of Pongamia pinnata against nickel mediated by Rhizobium pisi and Ochrobacterium pseudogrignonense. *Ecotoxicology and Environmental Safety*, **2021**, 217, 112244	7	0
311	Cadmium phytoremediation potential of Deenanath grass (Pennisetum pedicellatum) and the assessment of bacterial communities in the rhizospheric soil. **2021**, 1		1
310	A holistic approach to soil contamination and sustainable phytoremediation with energy crops in the Aegean Region of Turkey. **2021**, 276, 130192		4
309	Deciphering the dynamics of glomalin and heavy metals in soils contaminated with hazardous municipal solid wastes. **2021**, 416, 125869		2
308	Bioaugmentation and bioaugmentation-assisted phytoremediation of heavy metal contaminated soil by a synergistic effect of cyanobacteria inoculation, biochar, and purslane (Portulaca oleracea L.). **2021**, 1		4
307	Bibliometric Analysis of Current Status on Bioremediation of Petroleum Contaminated Soils during 2000-2019. **2021**, 18,		0
306	Assessing the influence of immobilization remediation of heavy metal contaminated farmland on the physical properties of soil. **2021**, 781, 146773		12
305	Polluted brownfield site converted into a public urban park: A place providing ecosystem services or a hidden health threat?. **2021**, 291, 112669		3
304	Zinc promotes cadmium leaf excretion and translocation in tall fescue (Festuca arundinacea). **2021**, 276, 130186		2
303	A reduction in cadmium accumulation and sulphur containing compounds resulting from grafting in eggplants (Solanum melogena) is associated with DNA methylation. 1		2
302	Impacts of heavy metals and medicinal crops on ecological systems, environmental pollution, cultivation, and production processes in China. *Ecotoxicology and Environmental Safety*, **2021**, 219, 112336	7	14
301	Heavy metals immobilization and improvement in maize (Zea mays L.) growth amended with biochar and compost. **2021**, 11, 18416		18
300	Insights on the bioremediation technologies for pesticide-contaminated soils. **2021**, 1		6
299	Improving Cd risk managements of rice cropping system by integrating source-soil-rice-human chain for a typical intensive industrial and agricultural region. **2021**, 313, 127883		4

298	Developing sustainable measures to restore fly-ash contaminated lands: Current challenges and future prospects.		6
297	Co-remediation of PTEs contaminated soil in mining area by heat modified sawdust and herb. **2021**, 281, 130908		3
296	Challenges in microbially and chelate-assisted phytoextraction of cadmium and lead - A review. **2021**, 287, 117667		20
295	Comparative effects of Tagetes patula L. extraction, mercapto-palygorskite immobilisation, and the combination thereof on Cd accumulation by wheat in Cd-contaminated soil. *Ecotoxicology and Environmental Safety*, **2021**, 224, 112639	7	3
294	Phytoremediation potential of the naturally occurring wetland species in protected Long Beach in Ulcinj, Montenegro. **2021**, 797, 148995		1
293	Phytoextraction efficiency of Arabidopsis halleri is driven by the plant and not by soil metal concentration. **2021**, 285, 131437		5
292	A review on disposal and utilization of phytoremediation plants containing heavy metals. *Ecotoxicology and Environmental Safety*, **2021**, 226, 112821	7	18
291	Analyzing cadmium-phytochelatin2 complexes in plant using terahertz and circular dichroism information. *Ecotoxicology and Environmental Safety*, **2021**, 225, 112800	7	3
290	Assessment of the potential for phytoremediation of cadmium polluted soils by various crop rotation patterns based on the annual input and output fluxes. **2022**, 423, 127183		2
289	Transgenic plant-mediated phytoremediation: Applications, challenges, and prospects. **2022**, 179-202		2
288	Electrokinetic-assisted Phytoremediation. **2022**, 371-398		1
287	Hydrothermally-altered feldspar reduces metal toxicity and promotes plant growth in highly metal-contaminated soils. **2022**, 286, 131768		2
286	Comparative cytology combined with transcriptomic and metabolomic analyses of Solanum nigrum L. in response to Cd toxicity. **2022**, 423, 127168		8
285	Melatonin is a potential target for improving horticultural crop resistance to abiotic stress. **2022**, 291, 110560		8
284	Bioremediation of contaminated soil with plant growth rhizobium bacteria. **2022**, 265-284		2
283	The effects of different electrode materials on seed germination of Solanum nigrum L. and its Cd accumulation in soil.. **2022**, 113, 291-299		
282	Current perspectives of soil nanoremediation. **2021**, 521-550		
281	Accumulation, Partitioning, and Bioavailability of Micronutrients in Plants and Their Crosstalk with Phytohormones. **2021**, 39-73		1

280	Aromatic and Medicinal Plants for Phytoremediation: A Sustainable Approach. **2021**, 485-543	2
279	Potential of Ricinus communis for the removal of toxic metals from mining dumping sites. **2021**, 263-286	
278	Recent advances toward exploiting medicinal plants as phytoremediators. **2021**, 371-383	1
277	Cadmium uptake and transfer by using EDTA, tea saponin, and citric acid as activators. **2021**, 23, 1052-1060	2
276	Improvement of Soil Quality by Solid Waste Recycling: A Global Perspective. **2021**, 637-667	
275	Plant□hicrobe□metal interactions for heavy metal bioremediation: a review. **2021**,	6
274	Recycle Strategies to Deal with Metal Nanomaterials by Using Aquatic Plants Through Phytoremediation Technique. **2021**, 589-616	2
273	Phytoremediation of heavy metal-contaminated soils: recent advances, challenges, and future prospects. **2021**, 29-51	1
272	Determining the Role of Leaf Relative Water Content and Soil Cation Exchange Capacity in Phytoextraction Process: Using Regression Modelling. **2021**, 107-120	
271	Arbuscular mycorrhizal (AM) fungi: Potential role in sustainable agriculture. **2021**, 203-225	
270	Phytoremediation of Agricultural Pollutants. **2020**, 27-81	3
269	Biotechnological Strategies for Remediation of Toxic Metal(loid)s from Environment. **2017**, 315-359	3
268	Green Technologies for Restoration of Damaged Ecosystem. **2020**, 357-380	3
267	Phytoremediation of Heavy Metals: An Overview and New Insight on Green Approaches. **2020**, 701-724	2
266	Sustainable Approaches to Remove Heavy Metals from Water. **2020**, 127-146	5
265	Assessment of phytostabilization potential of two Salix L. clones based on the effects of heavy metals on the root anatomical traits. **2020**, 27, 29361-29383	4
264	Enhanced cadmium phytoremediation of Glycine max L. through bioaugmentation of cadmium-resistant bacteria assisted by biostimulation. **2017**, 185, 764-771	43
263	Individual and combined application of EDTA and citric acid assisted phytoextraction of copper using jute (Corchorus capsularis L.) seedlings. **2020**, 19, 100895	26

262	Heavy metal remediation and resistance mechanism of Aeromonas, Bacillus, and Pseudomonas: A review. 1-48		10
261	Wild Plants for the Phytostabilization of Phosphate Mine Waste in Semi-Arid Environments: A Field Experiment. **2021**, 11, 42		9
260	A review of the performance of woody and herbaceous ornamental plants for phytoremediation in urban areas. **2020**, 13, 139-151		13
259	Remediation potential of early successional pioneer species Chenopodium album and Tripleurospermum inodorum. 36, 47-69		8
258	Valuation du niveau de contamination par les lments traces mtalliques (cadmium, cuivre, nickel et zinc) des sdiments de loued Boumerzoug et ses affluents, et leur transfert vers la chopodiace spinacia oleracea (L.). **2019**, 32, 255		2
257	Global perspectives and future research directions for the phytoremediation of heavy metal-contaminated soil: A knowledge mapping analysis from 2001 to 2020. **2022**, 16, 1		2
256	Leveraging high-throughput hyperspectral imaging technology to detect cadmium stress in two leafy green crops and accelerate soil remediation efforts. **2022**, 292, 118405		2
255	Layered double hydroxides: Scale production and application in soil remediation as super-stable mineralizer. **2021**, 41, 42-42		2
254	Phytoremediation technology and food security impacts of heavy metal contaminated soils: A review of literature. **2021**, 288, 132555		19
253	Identification of cadmium tolerant and sensitive genotypes of castor and their contrasting responses to cadmium treatment. **2021**, 1		
252	Super-stable mineralization effect of layered double hydroxides for heavy metals: Application in soil remediation and perspective. **2021**, 1, 20210052		3
251	Adsorption Behavior of Lead Ions from Wastewater on Pristine and Aminopropyl-Modified Blast Furnace Slag. **2021**, 13, 2735		1
250	Effect of dissolved organic matter on the phytoremediation of Cd-contaminated soil by cotton. *Ecotoxicology and Environmental Safety*, **2021**, 226, 112842	7	2
249	Investigation and Modeling of Manganese Concentration in the Gravel Roadside.		
248	Mercury Distribution in Tobacco (<i>Nicotiana tabacum</i>) Cell. **2018**, 09, 127-135		
247	Phytoremediation of Lead: A Review. **2020**, 171-202		
246	Effects of exogenous nitric oxide and ethylenediaminetetraacetic acid on cadmium toxicity and accumulation in ryegrass. 64, 422-429		0
245	Effects of Root Bioaccumulation of Arsenic and Mercury on the Expression of the Nramp2b Gene in Prosopis Alba (Griseb). **2020**, 1, 055-063		

244	Accumulation and Effect of Heavy Metals on the Germination and Growth of Salsola vermiculata L. Seedlings. **2021**, 13, 539	2
243	Promising Technologies for Cd-Contaminated Soils: Drawbacks and Possibilities. **2020**, 63-91	3
242	Kadmiyum ve NaCl Uygulamalarının Brokolinin (Brassica oleracea var. italica) Kuru Madde Verimi ile Cd ve Besin Elementi Alınlarına Etkisi.	0
241	Heavy Metal Phytoremediation by Bioenergy Plants and Associated Tolerance Mechanisms. **2021**, 30, 253-274	2
240	Earthworms as candidates for remediation of potentially toxic elements contaminated soils and mitigating the environmental and human health risks: A review. **2021**, 158, 106924	3
239	Phytoremediation of pharmaceutical wastes. **2022**, 387-414	
238	Economic feasibility of phytoremediation. **2022**, 481-502	0
237	Benefits and limitations of phytoremediation: Heavy metal remediation review. **2022**, 227-238	0
236	Nano-phytoremediation for soil contamination: An emerging approach for revitalizing the tarnished resource. **2022**, 115-138	1
235	Phytoextraction of Heavy Metals from Complex Industrial Waste Disposal Sites. **2020**, 341-371	1
234	Potential use of Pennisetum purpureum for phytoremediation and bioenergy production: a mini review. 14-26	3
233	Bioremediation of Toxic Pollutants: Features, Strategies, and Applications. **2020**, 361-383	1
232	Insight into the Influencing Mechanism of Endophytic Bacteria on the Adsorption of Heavy Metals by Plants: A Review. **2021**, 13, 1401-1414	2
231	Garlic and cilantro assisted phytoextraction of zinc using Sansevieria roxburghiana from contaminated soil. **2021**, 38, 102203	0
230	Phytoremediation of Toxic Metals: A Sustainable Green Solution for Clean Environment. **2021**, 11, 10348	6
229	Phytoremediation of copper-contaminated soil by Artemisia absinthium: comparative effect of chelating agents. **2021**, 1	5
228	Phytoremediation: An Ecological Solution for Decontamination of Polluted Urban Soils.	1
227	Sintetinio majenito adsorbcinės savybės vario jonams.	

226	Heavy metal phytoremediation: Potential and advancement. 81-93	
225	Phytoremediation: A Synergistic Interaction Between Plants and Microbes for Removal of Unwanted Chemicals/Contaminants. **2021**, 199-222	1
224	Phytoremediation Potential of Vetiver Grass (Vetiveria Zizanioides) in Two Mixed Heavy Metal Contaminated Soils from the Zoundweogo and Boulkiemde Regions of Burkina Faso (West Africa). **2021**, 09, 73-88	0
223	Hydrogels derived from galactoglucomannan hemicellulose with inorganic contaminant removal properties.. **2021**, 11, 35960-35972	1
222	Combining phytoremediation and biorefinery: Metal extraction from lead contaminated Miscanthus during pretreatment using the ionoSolv process. **2022**, 176, 114259	0
221	The impacts of gold mining on the welfare of local farmers in Asutifi-North District in Ghana: A quantitative and multi-dimensional approach. **2022**, 75, 102458	1
220	Mercury distribution in an Upper St. Lawrence River wetland dominated by cattail (Typha angustifolia). **2021**, 41, 1	
219	Phytoextraction of Cr(VI)-Contaminated Soil by : A Case Study. **2021**, 9,	3
218	Enhanced Phytoremediation of Soil Heavy Metal Pollution and Commercial Utilization of Harvested Plant Biomass: a Review. **2021**, 232, 1	0
217	Heavy Metal Pollution in Aquaculture: Sources, Impacts and Mitigation Techniques. **2021**, 1	9
216	Root-associated microbiota drive phytoremediation strategies to lead of Sonchus Asper (L.) Hill as revealed by intercropping-induced modifications of the rhizosphere microbiome. **2021**, 1	1
215	Vegetation and Environmental Changes on Contaminated Soil Formed on Waste from an Historic Zn-Pb Ore-Washing Plant.. **2021**, 10,	2
214	Development of phytoremediator screening strategy and exploration of Pennisetum aided chromium phytoremediation mechanisms in soil. **2021**, 133160	0
213	Estimating the spatial distribution of soil total arsenic in the suspected contaminated area using UAV-Borne hyperspectral imagery and deep learning. **2021**, 133, 108384	2
212	Investigating cyanogen rich efficacy for Ru phytomining and application in catalytic reactions.. **2021**, 12, 1165-1176	0
211	Design of nitrogen-phosphorus-doped biochar and its lead adsorption performance.. **2022**, 1	0
210	Crop selection reduces potential heavy metal(loid)s health risk in wastewater contaminated agricultural soils.. **2022**, 819, 152502	2
209	Ecological evaluation of heavy metal pollution in the soil of Pb-Zn mines.. **2022**, 1	2

208	Cadmium binding during leaf senescence in Festuca arundinacea: Promotion phytoextraction efficiency by harvesting dead leaves.. **2021**, 289, 133253	1
207	Safe utilization of cadmium- and lead-contaminated farmland by cultivating a winter rapeseed/maize rotation compared with two phytoextraction approaches.. **2021**, 304, 114306	1
206	Multi-regional land disturbances induced by mineral use in a product-based approach: A case study of gasoline, hybrid, battery electric and fuel cell vehicle production in Japan. **2022**, 178, 106093	0
205	Graphene-based nanomaterials in the electroplating industry: A suitable choice for heavy metal removal from wastewater.. **2021**, 292, 133448	4
204	Recovery of Valuable Heavy Metals from Polluted Soil Using Phytomining Process - A New Challenge for Earning Secondary Raw Materials and Health Risk Reduction. **2021**,	
203	Comparison of different phytoremediation strategies for acid mine drainage (AMD). **2022**, 963, 012040	
202	Phytoremediation of Cadmium Polluted Soils: Current Status and Approaches for Enhancing. **2022**, 6, 3	6
201	Screening of various Brassica species for phytoremediation of heavy metals-contaminated soil of Lakki Marwat, Pakistan.. **2022**, 1	0
200	Prospects of Using Soil Microbiome of Mine Tips for Remediation of Anthropogenically Disturbed Ecosystems. **2022**, 51, 883-904	1
199	Potentially Toxic Elements□Contamination of Soils Affected by Mining Activities in the Portuguese Sector of the Iberian Pyrite Belt and Optional Remediation Actions: A Review. **2022**, 9, 11	4
198	Developing propagation protocols for Justicia lanstyakii Rizz. (Acanthaceae), an ornamental Ni-accumulating subshrub of Brazilian Cerrado. **2022**, 77, 967	1
197	Phytoaccumulation of Heavy Metals by Sodom Apple (Calotropis procera (Aiton) W. T. Aiton) along an Urban□Rural Gradient. **2022**, 12, 1003	0
196	Jasmonic Acid and EDTA-Enhanced Cd and Pb Phytoextraction by the Halophytic Plants Quail Bush [Atriplex lentiformis (Torr.) S. Wats]. 1	2
195	Cadmium Uptake and Growth Responses of Seven Urban Flowering Plants: Hyperaccumulator or Bioindicator?. **2022**, 14, 619	4
194	Phosphorus Fertilizers Enhance the Phytoextraction of Cadmium through L.. **2022**, 11,	0
193	Advances in dye contamination: health hazards, biodegradation, and bioremediation. **2022**, 139-162	
192	Phytoremediator Potential of Ipomea asarifolia in Gold Mine Waste Treated with Iron Impregnated Biochar. **2022**, 12, 150	0
191	Structure analysis and non-invasive detection of cadmium-phytochelatin2 complexes in plant by deep learning Raman spectrum.. **2021**, 427, 128152	2

190	Emerging frontiers in microbe mediated pesticide remediation: Unveiling role of omics and In silico approaches in engineered environment.. **2022**, 299, 118851	5
189	Interactions between soil protists and pollutants: An unsolved puzzle.. **2022**, 429, 128297	2
188	Integrated approaches to mitigate threats from emerging potentially toxic elements: A way forward for sustainable environmental management.. **2022**, 112844	4
187	Phytoremediation: A sustainable green approach for environmental cleanup. **2022**, 49-75	0
186	Phytoextraction of heavy metals: Challenges and opportunities. **2022**, 173-187	
185	Phytoremediation of heavy metals, metalloids, and radionuclides: Prospects and challenges. **2022**, 253-276	
184	Potential and prospects of weed plants in phytoremediation and eco-restoration of heavy metals polluted sites. **2022**, 187-205	0
183	Lead Phytoremediation, Distribution, and Toxicity in Rapeseed (Brassica napus L.): the Role of Single and Combined Use of Plant Growth Regulators and Chelators. 1	0
182	Origin and risk assessment, and evaluation of heavy metal pollution in the soil and air of Tehran (case study: central district in Tehran city). 1	
181	Combined application of marble waste and beneficial microorganisms: toward a cost-effective approach for restoration of heavy metals contaminated sites.. **2022**, 1	1
180	Utilizing Mediterranean Plants to Remove Contaminants from the Soil Environment: A Short Review. **2022**, 12, 238	1
179	Bioavailability, Accumulation and Distribution of Toxic Metals (As, Cd, Ni and Pb) and Their Impact on Plant Nutrient Metabolism.. **2021**, 18,	0
178	Phytoremediation of Soils Contaminated by Copper Smelting in Chile: Results of a Decade of Research. **2021**, 54, 1967-1974	0
177	Phytoremediation: A Tool for Environmental Sustainability. **2021**, 405-421	
176	Phytoremediation: Mechanistic Approach for Eliminating Heavy Metal Toxicity from Environment. **2021**, 513-543	
175	Transcriptome and Co-Expression Network Analyses Reveal Key Factors Responsible for Cadmium Tolerance and Translocation in Broomcorn Millet.	
174	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
173	Naturally Growing Native Plants of Wastelands: Their Stress Management Strategies and Prospects in Changing Climate. **2022**, 149-168	

172	Phytoremediation of Soils Contaminated with Heavy Metals from Gold Mining Activities Using D. Don.. **2022**, 11,	4
171	Simulated Bioavailability of Heavy Metals (Cd, Cr, Cu, Pb, Zn) in Contaminated Soil Amended with Natural Zeolite Using Diffusive Gradients in Thin-Films (DGT) Technique. **2022**, 12, 321	3
170	Distribution of cadmium accumulated in the wood cells of poplar. **2022**,	
169	Comparative Transcriptomics Analysis of Roots and Leaves under Cd Stress in L.. **2022**, 23,	1
168	Activation of cadmium under simulated solar illumination and its impact on the mobility of Cd in flooded soils.. **2022**, 1	
167	Physiological Aspects of Absorption, Translocation, and Accumulation of Heavy Metals in Silphium perfoliatum L. Plants Grown in a Mining-Contaminated Soil. **2022**, 12, 334	2
166	Potential Applications of Rhizobacteria as Eco-Friendly Biological Control, Plant Growth Promotion and Soil Metal Bioremediation.	0
165	Challenges in Reducing Phytotoxicity of Metals in Soils Affected by Non-Ferrous Smelter Operations. **2022**, 15, 112-121	
164	Potassium and Silicon Synergistically Increase Cadmium and Lead Tolerance and Phytostabilization by Quinoa through Modulation of Physiological and Biochemical Attributes.. **2022**, 10,	0
163	Phytoremediation potential evaluation of three rhubarb species and comparative analysis of their rhizosphere characteristics in a Cd- and Pb-contaminated soil.. **2022**, 134045	3
162	Effective remediation of electronic waste contaminated soil by the combination of metal immobilization and phytoremediation. **2022**, 10, 107410	1
161	Phytoremediation: Mechanisms, plant selection and enhancement by natural and synthetic agents. **2022**, 8, 100203	13
160	Phytoremediation of toxic heavy metals by Brassica plants: A biochemical and physiological approach. **2022**, 8, 100204	3
159	Geochemical characteristics and source apportionment of toxic elements in the Tethys-Himalaya tectonic domain, Tibet, China.. **2022**, 831, 154863	0
158	Strategic management of contaminated water bodies: Omics, genome-editing and other recent advances in phytoremediation. **2022**, 27, 102463	1
157	Phytoremediation of Cadmium Contaminated Soil Using Sesbania sesban L. in Association with Bacillus anthracis PM21: A Biochemical Analysis. **2021**, 13, 13529	0
156	Heavy Metals Assimilation by Native and Non-Native Aquatic Macrophyte Species: A Case Study of a River in the Eastern Cape Province of South Africa.. **2021**, 10,	0
155	Environmental and Socioeconomic Impact of Copper Slag□A Review. **2021**, 11, 1504	3

154	Scale-up of Mycorrhizal-Assisted Phytoremediation system from Technology Readiness Level 6 (Relevant Environment) to 7 (Operational Environment): Cost-benefits within a Circular Economy Context.		0
153	Organic acids in conjunction with various oilseed sunflower cultivars promote Cd phytoextraction through regulating micro-environment in root zone. **2022**, 183, 114932		1
152	Data_Sheet_1.pdf. **2020**,		
151	Data_Sheet_1.pdf. **2019**,		
150	Data_Sheet_2.pdf. **2019**,		
149	Phytoremediation of Rare Tailings-Contaminated Soil. **2022**, 1-22		0
148	Environmental Friendly Technologies for Remediation of Toxic Heavy Metals: Pragmatic Approaches for Environmental Management. **2022**, 199-223		0
147	Maize Associated Bacterial Microbiome Linked Mitigation of Heavy Metal Stress: A Multidimensional Detoxification Approach. **2022**, 104911		1
146	Integrating and Two Species to Repair Soil Antimony Pollutions.. **2022**, 13, 871581		1
145	Plants-Microorganisms-Based Bioremediation for Heavy Metal Cleanup: Recent Developments, Phytoremediation Techniques, Regulation Mechanisms, and Molecular Responses.. **2022**, 23,		5
144	Influence of Clay Mineral Amendments Characteristics on Heavy Metals Uptake in Vetiver Grass (Chrysopogon zizanioides L. Roberty) and Indian Mustard (Brassica juncea L. Czern). **2022**, 14, 5856		2
143	Removal of Cr(VI) and Pb(II) from aqueous solution using Mg/Al layered double hydroxides-mordenite composite. 1-14		
142	An Overview on Bioremediation Technologies for Soil Pollution in E-waste Dismantling Areas. **2022**, 107839		2
141	Efficiency of heterogeneous chelating agents on the phytoremediation potential and growth of Sasa argenteostriata (Regel) E.G. Camus on Pb-contaminated soil.. *Ecotoxicology and Environmental Safety*, **2022**, 238, 113603	7	1
140	Perspectives for phytoremediation capability of native plants growing on Angouran Pb-Zn mining complex in northwest of Iran.. **2022**, 315, 115184		0
139	Adsorption effect and the removal mechanism of silicate composite biochar particles on cadmium in soil.. **2022**, 134970		0
138	Environment Sustainability and Role of Biotechnology. **2022**, 21-64		
137	Enhanced As, Pb and Zn Uptake by Helianthus annuus from a Heavily Contaminated Mining Soil Amended with EDTA and Olive Mill Wastewater Due to Increased Element Mobilization, as Verified by Sequential Extraction Schemes. **2022**, 9, 61		1

136	Characterization of soil microbial community activity and structure for reducing available Cd by rice straw biochar and Bacillus cereus RC-1. **2022**, 156202	0
135	The involvement of nitric oxide and ethylene on the formation of endodermal barriers in response to Cd in hyperaccumulator Sedum alfredii. **2022**, 119530	0
134	Shifts in the bacterial community caused by combined pollutant loads in the North Canal River, China. **2022**,	0
133	Dynamic and Comparative Transcriptome Analyses Reveal Key Factors Contributing to Cadmium Tolerance in Broomcorn Millet. **2022**, 23, 6148	0
132	Role of SaPCR2 in Zn Uptake in the Root Elongation Zone of the Zn/Cd Hyperaccumulator Sedum alfredii. **2022**, 12, 768	
131	Plant growth-promoting bacteria in phytoremediation of metal-polluted soils: Current knowledge and future directions. **2022**, 156435	2
130	Recent advances in soil remediation technology for heavy metal contaminated sites: A critical review. **2022**, 156417	4
129	Phytoextraction by Moso Bamboo under high level chromium stress in mediterranean conditions. **2022**, 317, 115479	1
128	Bast fiber crops in phytoremediation. **2022**, 29-56	
127	Microbial remediation of hexavalent chromium from the contaminated soils. **2022**, 527-546	
126	Emerging issues and challenges for microbes-assisted remediation. **2022**, 47-89	0
125	Phytoremediation: Progress, potential, and prospects. **2022**, 1-27	
124	Woody fiber crops in phytoremediation. **2022**, 89-113	
123	Spatial variability and source analysis of typical soil trace elements at permafrost section along national highway 214 in the eastern Qinghai□Tibet Plateau.	0
122	Global leaf and root transcriptome in response to cadmium reveals tolerance mechanisms in Arundo donax L. **2022**, 23,	0
121	Coronilla juncea, a native candidate for phytostabilization of potentially toxic elements and restoration of Mediterranean soils. **2022**, 12,	1
120	Technologies for removing heavy metal from contaminated soils on farmland: A review. **2022**, 135457	5
119	Effect of the Co-Application of Eucalyptus Wood Biochar and Chemical Fertilizer for the Remediation of Multimetal (Cr, Zn, Ni, and Co) Contaminated Soil. **2022**, 14, 7266	1

118	Role of rhizobia in promoting non-enzymatic antioxidants to mitigate nitrogen-deficiency and nickel stresses in Pongamia pinnata. *Ecotoxicology and Environmental Safety*, **2022**, 241, 113789	7	2
117	Coupling phytoremediation of Pb-contaminated soil and biomass energy production: A comparative Life Cycle Assessment. **2022**, 840, 156675		2
116	Metallic Trace Elements in Soil: Persistence, Toxicity, Bioaccumulation, and Biological Remediation. **2022**, 55-69		
115	Aromatic Plants as New Candidates in Phytoremediation-OMICS Technology. **2022**, 385-414		
114	Role of legumes in phytoremediation of heavy metals. **2022**, 345-360		
113	Effect of Metals or Trace Elements on Wheat Growth and Its Remediation in Contaminated Soil.		0
112	Spatial Distribution of Soil Heavy Metals and Associated Environmental Risks near Major Roads in Southern Tibet, China. **2022**, 19, 8380		2
111	Accumulation of heavy metals in wild plants collected from the industrial sites：Potential for phytoremediation.		0
110	Assessment of Soil-Heavy Metal Pollution and the Health Risks in a Mining Area from Southern Shaanxi Province, China. **2022**, 10, 385		2
109	Effect of Low-Molecular-Weight Organic Acids on Migration Characteristics of Pb in Reclaimed Soil. 10,		
108	Chromium phytoextraction using Phyllostachys pubescens (Moso Bamboo). 1-9		2
107	Chromium toxicity and its remediation by using endophytic bacteria and nanomaterials: A review. **2022**, 318, 115620		1
106	Potential application of enhanced phytoremediation for heavy metals treatment in Nepal. **2022**, 306, 135581		1
105	The interactions of Cr (VI) concentrations and amendments (biochar and manure) on growth and metal accumulation of two species of Salicornia in contaminated soil.		
104	Role of Sedum alfredii and soil microbes in the remediation of ultra-high content heavy metals contaminated soil. **2022**, 339, 108090		0
103	Phytoremediation of metals: Bioconcentration and translocation factors. **2022**, 19-37		
102	Research on the Effects of Rare Earth Combined Contamination on Soil Microbial Diversity and Enzyme Activity. **2022**, 29, 227-236		0
101	Phytoextraction potential of arsenic and cadmium and response of rhizosphere microbial community by intercropping with two types of hyperaccumulators.		1

100	Bioremediation of petroleum-contaminated soil in arid region using different arid-tolerant tree, shrub, and grass plant species with bacteria.	0
99	Proposition of critical thresholds for copper and zinc transfer to solution in soils. **2022**, 194,	
98	Environmental and human health implications of metal(loid)s: Source identification, contamination, toxicity, and sustainable clean-up technologies. 10,	0
97	Dodonaea viscosa (Sapindaceae) as a phytoremediator for soils contaminated by heavy metals in abandoned mines.	0
96	Assessing the suitable regions and the key factors for three Cd-accumulating plants (Sedum alfredii, Phytolacca americana, and Hylotelephium spectabile) in China using MaxEnt model. **2022**, 158202	
95	Plant and microbe mediated bioremediation: A long-term remedy for heavy metal pollution. 69-90	
94	Soil Pollution and Plant Efficiency Indices for Phytoremediation of Heavy Metal(loid)s: Two-Decade Study (2002–2021). **2022**, 12, 1330	0
93	Assessment of health risks associated with the consumption of wastewater-irrigated vegetables in urban areas.	0
92	Colonization and Phytoremediation Potential for Miscanthus sacchariflorus in copper tailings. 1-17	
91	Recent Progress on Sustainable Phytoremediation of Heavy Metals from Soil. **2022**, 108482	5
90	Risk assessment and early warning of the presence of heavy metal pollution in strawberries. **2022**, 243, 114001	0
89	Source appointment of potentially toxic elements (PTEs) at an abandoned realgar mine: Combination of multivariate statistical analysis and three common receptor models. **2022**, 307, 135923	1
88	Helicrysum italicum (roth) G. Don, a promising species for the phytostabilization of polluted mine sites: A case study in the Montevecchio mine (Sardinia, Italy). **2022**, 242, 107088	0
87	CRISPR/Cas9 technology as an innovative approach to enhancing the phytoremediation: Concepts and implications. **2022**, 323, 116296	1
86	Grafting with an invasive Xanthium strumarium improves tolerance and phytoremediation of native congener X. sibiricum to cadmium/copper/nickel tailings. **2022**, 308, 136561	0
85	Role of microorganism in phytoremediation of mine spoiled soils. **2022**, 379-400	0
84	Soil heavy metal pollution: impact on plants and methods of bioremediation. **2022**, 73-84	0
83	Hazardous elements in plants: sources, effect and management. **2022**, 113-128	0

82	Heavy Metal Accumulation in Fruits and Vegetables and Human Health Risk Assessment: Findings From Maharashtra, India. **2022**, 16, 117863022211191	3
81	Phytoremediation: An introduction. **2022**, 3-18	0
80	Remediation of toxic metals/metalloids from soil and water through transgenic plants: a review. **2022**, 543-562	0
79	Biodegradation of Pollutants. **2022**, 1-27	0
78	Recent advances in microbial-aided phytostabilization of trace element contaminated soils. **2022**, 165-206	0
77	Genetically engineered plants for phytoremediation of heavy metals. **2022**, 223-239	0
76	Role of genetic engineering in microbe-assisted phytoremediation of polluted sites. **2022**, 63-84	0
75	Plant-microbe association to improve phytoremediation of heavy metal. **2022**, 113-146	0
74	Overview of phytoremediation techniques for the assessment of metal(loid)s. **2022**, 1-14	0
73	Phytoremediation and Therapeutic Potential of Neglected Plants: An Invasive Aquatic Weeds and Ornamental Plant. **2022**, 259-290	0
72	Combinatorial genetic engineering approaches in phytoremediation of pollutants. **2022**, 55-71	0
71	Soil Contamination and Conservation. **2022**, 289-309	0
70	Integrated physiologic and proteomic analysis of Stropharia rugosoannulata mycelia in response to Cd stress. **2023**, 441, 129877	0
69	Hazards Caused by Mining Activities and Corresponding Treatment Technologies. 11, 122-133	0
68	Principles and Applicability of Integrated Remediation Strategies for Heavy Metal Removal/Recovery from Contaminated Environments.	1
67	Physiological and biochemical responses of Brassica napus L.´cultivars exposed to Cd stress. **2022**, 68, 431-440	0
66	Evidence of the impacts of metal mining and the effectiveness of mining mitigation measures on social–ecological systems in Arctic and boreal regions: a systematic map. **2022**, 11,	0
65	Plant–Microorganism Interactions Remediate Heavy Metal-contaminated Ecosystems. **2022**, 492-504	0

64	Effects of Sound Wave and Water Management on Growth and Cd Accumulation by Water Spinach (Ipomoea aquatica Forsk.). **2022**, 12, 2257	2
63	Phytoremediation of CdS/Te quantum dots by Ocimum basilicum in the presence of EDTA.	0
62	Optimizing Acetic Acid Application Strategy Can Effectively Promote the Remediation Performance of Oilseed Sunflower on Cd-Contaminated Soils. **2022**, 12, 1139	0
61	Toxic metal persistence and bioavailability in agricultural soil 40´years after sewage sludge incorporation.	0
60	Interaction between zinc and selenium bio-fortification and toxic metals (loid) accumulation in food crops. 13,	0
59	Application for Ecological Restoration of Contaminated Soil: Phytoremediation. **2022**, 19, 13124	1
58	Promising strategies of circular bioeconomy using heavy metal phytoremediated plants □A critical review. **2022**, 137097	0
57	Lactic acid bacteria promoted soil quality and enhanced phytoextraction of Cd and Zn by mustard: A trial for bioengineering of toxic metal contaminated mining soils. **2022**, 114646	1
56	Enhanced cadmium phytoremediation capacity of poplar is associated with increased biomass and Cd accumulation under nitrogen deposition conditions. **2022**, 246, 114154	0
55	GIS-based land-use suitability analysis for urban agriculture development based on pollution distributions. **2022**, 123, 106426	0
54	Assessment of phytoremediation potential of native plant species naturally growing in a heavy metal-polluted industrial soils. 84,	4
53	Medicinal and Aromatic Plant Species with Potential for Remediation of Metal(loid)-Contaminated Soils. **2022**, 173-236	0
52	Comparative Evaluation of Technologies at a Heavy Metal Contaminated Site: The Role of Feasibility Studies. **2022**, 9, 139	0
51	S-Methylmethionine Effectively Alleviates Stress in Szarvasi-1 Energy Grass by Reducing Root-to-Shoot Cadmium Translocation. **2022**, 11, 2979	0
50	Phytoremediation Potential of Native Hyperaccumulator Plants Growing on Heavy-Metal-Contaminated Soil of Khatunabad Copper Smelter and Refinery, Iran. **2022**, 14, 3597	2
49	Effect of different amounts of fruit peel-based activator combined with phosphate-solubilizing bacteria on enhancing phytoextraction of Cd from farmland soil by ryegrass. **2022**, 120602	1
48	Co-utilization of zinc contaminated soil and red mud for high-strength ceramsite: Preparation, zinc immobilization mechanism and environmental safety risks. **2023**, 170, 491-497	0
47	J. curcas and Manihot esculenta are potential super plants for phytoremediation in multi-contaminated mine spoils. **2022**, 373, 00080	0

46	Transcriptomic Sequencing Analysis on Key Genes and Pathways Regulating Cadmium (Cd) in Ryegrass (Lolium perenne L.) under Different Cadmium Concentrations. **2022**, 10, 734	0
45	Combined genome-wide association study and gene co-expression network analysis identified ZmAKIN1 involved in lead tolerance and accumulation in maize seedlings. **2022**,	1
44	Cadmium-resistant Streptomyces stimulates phytoextraction potential of Crotalaria juncea L. in cadmium-polluted soil. 1-10	0
43	Effects of Simultaneous Application of Double Chelating Agents to Pb-Contaminated Soil on the Phytoremediation Efficiency of Indocalamus decorus Q. H. Dai and the Soil Environment. **2022**, 10, 713	0
42	An overview of heavy metals toxicity in plants, tolerance mechanism, and alleviation through lysine-chelation with micro-nutrients: A novel approach.	0
41	Hydrogen peroxide pretreatment assisted phytoremediation of sodium dodecyl sulfate by Juncus acutus L. **2022**, 22,	0
40	Potential Efficiency of Wild Plant Species (Pluchea dioscoridis (L.) DC.) for Phytoremediation of Trace Elements on Contaminated Locations. **2023**, 15, 119	0
39	Effect of Low-Molecular Organic Acids on the Migration Characteristics of Nickel in Reclaimed Soil from The Panyi Mine Area in China. **2022**, 10, 798	0
38	Arsenic in Gold Mining Wastes: An Environmental and Human Health Threat in Ghana. **2023**, 49-83	0
37	UVB-Pretreatment-Enhanced Cadmium Absorption and Enrichment in Poplar Plants. **2023**, 24, 52	0
36	Schoenoplectus californicus as Potential Remover of Metal Elements from Mine Effluents: A Laboratory Assessment. 2200029	0
35	Environmental sustainability and resilience; Phytoremediation of heavy metals and plant physiological response in the Marble waste polluted ecosystem. **2022**, 135733	1
34	Assessment of Lead (Pb) Accumulation in Native Plants Growing on Coal Mine Site in Northeastern Vietnam. **2023**, 237-252	0
33	Soil flooding and its outcome on cadmium and nutrient uptake affect photosynthetic activity in Inga laurina plants.	0
32	Effect of manure and biochar on the aluminum, copper, and iron bioaccumulation by Salicornia species in soil.	0
31	Nerium oleander could be used for sustainable management of traffic-borne elemental-enriched roadside soils.	0
30	Film mulching alters soil properties and increases Cd uptake in Sedum alfredii Hance-oil crop rotation systems. **2023**, 318, 120948	0
29	Remediation methods of heavy metal contaminated soils from environmental and geotechnical standpoints. **2023**, 867, 161468	2

28	Field experiments to assess the remediation efficiency of metal-contaminated soil by flushing with ferric chloride followed by applying amendments. **2023**, 868, 161592	0
27	Phytoremediation strategies of plants: Challenges and opportunities. **2023**, 211-229	0
26	Biological methods for the treatment of e-waste. **2023**, 163-180	0
25	Study on the Remediation of Cd-Contaminated Soil by IAA and GA3Enhanced Hylotelephium erythrostictum. **2023**, 11, 15-26	0
24	Whole-Process Risk Management of Soil Amendments for Remediation of Heavy Metals in Agricultural Soil□ Review. **2023**, 20, 1869	1
23	Stabilization remediation of soil polluted by heavy metals using palygorskite modified with chlorides.	0
22	Organic pollutant and dye degradation with nanocomposites. **2023**, 97-136	0
21	Stable Artificial Autopolyploids of the Zn/Cd Accumulator Arabidopsis arenosa□ Promising Genetic Resource for Phytoremediation. **2023**, 13, 1617	0
20	Current Status of and Challenges for Phytoremediation as a Sustainable Environmental Management Plan for Abandoned Mine Areas in Korea. **2023**, 15, 2761	0
19	Effect of Copper (Cu) Induced Toxicity on Growth and Yield of Cichorium intybus L. and its Soil Remediation Potential.	0
18	Effects of Zn Exposure on Populus simonii Seedling Growth and Its Resistance to Leaf Rust. **2023**, 14, 783	0
17	Soil adsorption and transport of lead in the presence of perovskite solar cell-derived organic cations. **2023**, 451, 131147	0
16	The influence of diverse fertilizer regimes on the phytoremediation potential of Pteris vittata in an abandoned nonferrous metallic mining site. **2023**, 880, 163246	0
15	Maximizing the potential of leachate from sewage sludge as a sustainable nutrients source to alleviate the fertilizer crisis. **2023**, 338, 117794	0
14	Analysis of metal(loid) pollution and possibilities of electrokinetic phytoremediation of abandoned coking plant soil. **2023**, 870, 161982	0
13	Nano-phytoremediation and Its Applications. **2023**, 335-364	0
12	Phytoremediation Potential of Heavy Metals by <i>Cyperus rotundus</i>. **2023**, 11, 20-35	0
11	Assessment of tea saponin and citric acid□assisted phytoextraction of Pb-contaminated soil by Salvia virgata Jacq. **2023**, 30, 49771-49778	0

10	Remediation of Environmental Contaminants Through Phytotechnology. **2023**, 234,	0
9	Phytoextraction of nickel, lead, and chromium from contaminated soil using sunflower, marigold, and spinach: comparison of efficiency and fractionation study. **2023**, 30, 50847-50863	0
8	Levels of Heavy Metals in Grapevine Soil and Leaf Samples in Response to Seasonal Change and Farming Practice in the Cape Winelands. **2023**, 11, 193	0
7	Research progress and hotspot analysis of rhizosphere microorganisms based on bibliometrics from 2012 to 2021. 14,	0
6	Biodegradation of Pollutants. **2023**, 899-925	0
5	Ecology and History of Wetland Research: Operating Scientific Principles of Eco-dynamics of Wetland Ecosystem with Special Reference to East Kolkata Wetland, India. **2023**, 39-165	0
4	Copper Phytoextraction Using Phyllostachys pubescens. **2023**, 15, 5238	0
3	Investigations Concerning Heavy Metals Dynamics in Reynoutria japonica Houtt.-Soil Interactions. **2023**, 11, 323	0
2	The Evaluation of the Phytoremediation Potential of the Energy Crops in Acid Soil by Sewage Sludge Fertilization. **2023**, 12, 866	0
1	Natural compounds for bioremediation and biodegradation of pesticides. **2023**, 445-488	0