Ling Zhao

List of Publications by Year
in descending order

68 papers	4,923 citations	87843 38 h-index	98753 67 g-index
68 all docs	68 docs citations	68 times ranked	3823 citing authors

#	Article	IF	Citations
1	Heterogeneity of biochar properties as a function of feedstock sources and production temperatures. Journal of Hazardous Materials, 2013, 256-257, 1-9.	6.5	287
2	The Interfacial Behavior between Biochar and Soil Minerals and Its Effect on Biochar Stability. Environmental Science & Technology, 2016, 50, 2264-2271.	4.6	268
3	Biochar as both electron donor and electron shuttle for the reduction transformation of Cr(VI) during its sorption. Environmental Pollution, 2019, 244, 423-430.	3.7	258
4	Indispensable role of biochar-inherent mineral constituents in its environmental applications: A review. Bioresource Technology, 2017, 241, 887-899.	4.8	239
5	Effects of Mineral Additives on Biochar Formation: Carbon Retention, Stability, and Properties. Environmental Science & Technology, 2014, 48, 11211-11217.	4.6	233
6	Persulfate Oxidation of Sulfamethoxazole by Magnetic Iron-Char Composites via Nonradical Pathways: Fe(IV) Versus Surface-Mediated Electron Transfer. Environmental Science & Technology, 2021, 55, 10077-10086.	4.6	180
7	N-doped biochar synthesized by a facile ball-milling method for enhanced sorption of CO2 and reactive red. Chemical Engineering Journal, 2019, 368, 564-572.	6.6	178
8	Copyrolysis of Biomass with Phosphate Fertilizers To Improve Biochar Carbon Retention, Slow Nutrient Release, and Stabilize Heavy Metals in Soil. ACS Sustainable Chemistry and Engineering, 2016, 4, 1630-1636.	3.2	170
9	Biochar as simultaneous shelter, adsorbent, pH buffer, and substrate of Pseudomonas citronellolis to promote biodegradation of high concentrations of phenol in wastewater. Water Research, 2020, 172, 115494.	5.3	151
10	Chemical transformation of CO2 during its capture by waste biomass derived biochars. Environmental Pollution, 2016, 213, 533-540.	3.7	140
11	Contrasting impacts of pre- and post-application aging of biochar on the immobilization of Cd in contaminated soils. Environmental Pollution, 2018, 242, 1362-1370.	3.7	127
12	Characterization and quantification of electron donating capacity and its structure dependence in biochar derived from three waste biomasses. Chemosphere, 2018, 211, 1073-1081.	4.2	127
13	Physicochemical property and colloidal stability of micron- and nano-particle biochar derived from a variety of feedstock sources. Science of the Total Environment, 2019, 661, 685-695.	3.9	126
14	Different mechanisms between biochar and activated carbon for the persulfate catalytic degradation of sulfamethoxazole: Roles of radicals in solution or solid phase. Chemical Engineering Journal, 2019, 375, 121908.	6.6	113
15	Pyrolysis-temperature depended electron donating and mediating mechanisms of biochar for Cr(VI) reduction. Journal of Hazardous Materials, 2020, 388, 121794.	6.5	103
16	Interaction with low molecular weight organic acids affects the electron shuttling of biochar for Cr(VI) reduction. Journal of Hazardous Materials, 2019, 378, 120705.	6.5	90
17	Mineral Constituents Profile of Biochar Derived from Diversified Waste Biomasses: Implications for Agricultural Applications. Journal of Environmental Quality, 2013, 42, 545-552.	1.0	87
18	A review of pristine and modified biochar immobilizing typical heavy metals in soil: Applications and challenges. Journal of Hazardous Materials, 2022, 432, 128668.	6.5	83

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19	Pyrolysis-temperature depended quinone and carbonyl groups as the electron accepting sites in barley grass derived biochar. Chemosphere, 2019, 232, 273-280.	4.2	82
20	Country-level potential of carbon sequestration and environmental benefits by utilizing crop residues for biochar implementation. Applied Energy, 2021, 282, 116275.	5.1	81
21	Distribution and evolution of organic matter phases during biochar formation and their importance in carbon loss and pore structure. Chemical Engineering Journal, 2014, 250, 240-247.	6.6	75
22	Interaction of Inherent Minerals with Carbon during Biomass Pyrolysis Weakens Biochar Carbon Sequestration Potential. ACS Sustainable Chemistry and Engineering, 2019, 7, 1591-1599.	3.2	74
23	Contribution of different iron species in the iron-biochar composites to sorption and degradation of two dyes with varying properties. Chemical Engineering Journal, 2020, 389, 124471.	6.6	74
24	Impacts of different activation processes on the carbon stability of biochar for oxidation resistance. Bioresource Technology, 2021, 338, 125555.	4.8	74
25	Phosphorus-Assisted Biomass Thermal Conversion: Reducing Carbon Loss and Improving Biochar Stability. PLoS ONE, 2014, 9, e115373.	1.1	71
26	Potassium doping increases biochar carbon sequestration potential by 45%, facilitating decoupling of carbon sequestration from soil improvement. Scientific Reports, 2019, 9, 5514.	1.6	69
27	Roles of the mineral constituents in sludge-derived biochar in persulfate activation for phenol degradation. Journal of Hazardous Materials, 2020, 398, 122861.	6.5	65
28	Energy Balance of a Biodrying Process for Organic Wastes of High Moisture Content: A Review. Drying Technology, 2013, 31, 132-145.	1.7	64
29	Endogenous minerals have influences on surface electrochemistry and ion exchange properties of biochar. Chemosphere, 2015, 136, 133-139.	4.2	62
30	Short-term effects of raw rice straw and its derived biochar on greenhouse gas emission in five typical soils in China. Soil Science and Plant Nutrition, 2013, 59, 800-811.	0.8	60
31	Different alkaline minerals interacted with biomass carbon during pyrolysis: Which one improved biochar carbon sequestration?. Journal of Cleaner Production, 2020, 255, 120162.	4.6	60
32	Evolution of redox activity of biochar during interaction with soil minerals: Effect on the electron donating and mediating capacities for Cr(VI) reduction. Journal of Hazardous Materials, 2021, 414, 125483.	6.5	57
33	Bioleaching of spent Niâ€“Cd batteries by continuous flow system: Effect of hydraulic retention time and process load. Journal of Hazardous Materials, 2008, 160, 648-654.	6.5	53
34	Nitrogen Transformation during Pyrolysis of Various N-Containing Biowastes with Participation of Mineral Calcium. ACS Sustainable Chemistry and Engineering, 2020, 8, 12197-12207.	3.2	48
35	Pyrolysis temperature-dependent carbon retention and stability of biochar with participation of calcium: Implications to carbon sequestration. Environmental Pollution, 2021, 287, 117566.	3.7	48
36	Biomass-derived pyrolytic carbons accelerated Fe(III)/Fe(II) redox cycle for persulfate activation: Pyrolysis temperature-depended performance and mechanisms. Applied Catalysis B: Environmental, 2021, 297, 120446.	10.8	48

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37	Suppressed formation of polycyclic aromatic hydrocarbons (PAHs) during pyrolytic production of Fe-enriched composite biochar. Journal of Hazardous Materials, 2020, 382, 121033.	6.5	43
38	Participation of soil active components in the reduction of Cr(VI) by biochar: Differing effects of iron mineral alone and its combination with organic acid. Journal of Hazardous Materials, 2020, 384, 121455.	6.5	43
39	Direct and Indirect Electron Transfer Routes of Chromium(VI) Reduction with Different Crystalline Ferric Oxyhydroxides in the Presence of Pyrogenic Carbon. Environmental Science & Technology, 2022, 56, 1724-1735.	4.6	40
40	Phytotoxicity of individual and binary mixtures of rare earth elements (Y, La, and Ce) in relation to bioavailability. Environmental Pollution, 2019, 246, 114-121.	3.7	38
41	Sustainable conversion of contaminated dredged river sediment into eco-friendly foamed concrete. Journal of Cleaner Production, 2020, 252, 119799.	4.6	38
42	Comparison of bio-dissolution of spent Niâ€"Cd batteries by sewage sludge using ferrous ions and elemental sulfur as substrate. Chemosphere, 2008, 70, 974-981.	4.2	37
43	Sludge Bio-drying Process at Low Ambient Temperature: Effect of Bulking Agent Particle Size and Controlled Temperature. Drying Technology, 2012, 30, 1037-1044.	1.7	37
44	Release of nutrients and heavy metals from biochar-amended soil under environmentally relevant conditions. Environmental Science and Pollution Research, 2018, 25, 2517-2527.	2.7	36
45	Enhanced trichloroethylene biodegradation: Roles of biochar-microbial collaboration beyond adsorption. Science of the Total Environment, 2021, 792, 148451.	3.9	36
46	Mesoporous SBA-15 Supported Iron Oxide: A Potent Catalyst for Hydrogen Sulfide Removal. Water, Air, and Soil Pollution, 2008, 193, 247-257.	1.1	34
47	Interactions of CeO2 nanoparticles with natural colloids and electrolytes impact their aggregation kinetics and colloidal stability. Journal of Hazardous Materials, 2020, 386, 121973.	6.5	33
48	Metal chloride-loaded biochar for phosphorus recovery: Noteworthy roles of inherent minerals in precursor. Chemosphere, 2021, 266, 128991.	4.2	33
49	Toxicity characteristic leaching procedure over- or under-estimates leachability of lead in phosphate-amended contaminated soils. Chemosphere, 2015, 138, 744-750.	4.2	31
50	New insights into CO2 sorption on biochar/Fe oxyhydroxide composites: Kinetics, mechanisms, and in situ characterization. Chemical Engineering Journal, 2020, 384, 123289.	6.6	28
51	Development of phosphorus composite biochar for simultaneous enhanced carbon sink and heavy metal immobilization in soil. Science of the Total Environment, 2022, 831, 154845.	3.9	28
52	Interactions of arsenic, copper, and zinc in soil-plant system: Partition, uptake and phytotoxicity. Science of the Total Environment, 2020, 745, 140926.	3.9	27
53	Soil colloids affect the aggregation and stability of biochar colloids. Science of the Total Environment, 2021, 771, 145414.	3.9	27
54	Evaluation of long-term carbon sequestration of biochar in soil with biogeochemical field model. Science of the Total Environment, 2022, 822, 153576.	3.9	24

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55	Infiltration behavior of heavy metals in runoff through soil amended with biochar as bulking agent. Environmental Pollution, 2019, 254, 113114.	3.7	21
56	Mesoporous ball-milling iron-loaded biochar for enhanced sorption of reactive red: Performance and mechanisms. Environmental Pollution, 2021, 290, 117992.	3.7	21
57	The cation competition and electrostatic theory are equally valid in quantifying the toxicity of trivalent rare earth ions (Y3+ and Ce3+) to Triticum aestivum. Environmental Pollution, 2019, 250, 456-463.	3.7	19
58	Synergistic role of bulk carbon and iron minerals inherent in the sludge-derived biochar for As(V) immobilization. Chemical Engineering Journal, 2021, 417, 129183.	6.6	18
59	Commonwealth of Soil Health: How Do Earthworms Modify the Soil Microbial Responses to CeO₂ Nanoparticles?. Environmental Science & Technology, 2022, 56, 1138-1148.	4.6	17
60	Molecular weight-dependent heterogeneities in photochemical formation of hydroxyl radical from dissolved organic matters with different sources. Science of the Total Environment, 2020, 725, 138402.	3.9	16
61	The shuttling effects and associated mechanisms of different types of iron oxide nanoparticles for Cu(II) reduction by Geobacter sulfurreducens. Journal of Hazardous Materials, 2020, 393, 122390.	6.5	13
62	The microorganism and biochar-augmented bioreactive top-layer soil for degradation removal of 2,4-dichlorophenol from surface runoff. Science of the Total Environment, 2020, 733, 139244.	3.9	12
63	Ionic liquid-assisted production of high-porosity biochar with more surface functional groups: Taking cellulose as attacking target. Chemical Engineering Journal, 2022, 433, 133811.	6.6	12
64	Uptake of vegetable and soft drink affected transformation and bioaccessibility of lead in gastrointestinal track exposed to lead-contaminated soil particles. Ecotoxicology and Environmental Safety, 2020, 194, 110411.	2.9	11
65	Coherent toxicity prediction framework for deciphering the joint effects of rare earth metals (La and) Tj ETQq1 1 0.784314 rgBT /Overlo	4.2	10
66	Dynamic release and transformation of metallic copper colloids in flooded paddy soil: Role of soil reducible sulfate and temperature. Journal of Hazardous Materials, 2021, 402, 123462.	6.5	8
67	Bioleaching of spent Ni-Cd batteries and phylogenetic analysis of an acidophilic strain in acidified sludge. Frontiers of Environmental Science and Engineering in China, 2007, 1, 459-465.	0.8	7
68	Domestication of Oil-Degrading Strains and Bioremediation of Oil-Contaminated Soil in Daqing Oilfield. , 2009, , .		0