Bin Gao

List of Publications by Year
in descending order

482 papers	47,319 citations	1606 105 h-index	2439 197 g-index
483 all docs	483 docs citations	483 times ranked	27413 citing authors

#	Article	IF	Citations
1	Positive and negative carbon mineralization priming effects among a variety of biochar-amended soils. Soil Biology and Biochemistry, 2011, 43, 1169-1179.	4.2	1,093
2	Adsorption of VOCs onto engineered carbon materials: A review. Journal of Hazardous Materials, 2017, 338, 102-123.	6.5	1,031
3	Dairy-Manure Derived Biochar Effectively Sorbs Lead and Atrazine. Environmental Science & Technology, 2009, 43, 3285-3291.	4.6	1,025
4	Engineered/designer biochar for contaminant removal/immobilization from soil and water: Potential and implication of biochar modification. Chemosphere, 2016, 148, 276-291.	4.2	959
5	A review of biochar as a low-cost adsorbent for aqueous heavy metal removal. Critical Reviews in Environmental Science and Technology, 2016, 46, 406-433.	6.6	945
6	Atomically Thin Mesoporous Nanomesh of Graphitic C₃N₄ for High-Efficiency Photocatalytic Hydrogen Evolution. ACS Nano, 2016, 10, 2745-2751.	7.3	866
7	Surface functional groups of carbon-based adsorbents and their roles in the removal of heavy metals from aqueous solutions: A critical review. Chemical Engineering Journal, 2019, 366, 608-621.	6.6	790
8	Effect of biochar amendment on sorption and leaching of nitrate, ammonium, and phosphate in a sandy soil. Chemosphere, 2012, 89, 1467-1471.	4.2	713
9	Removal of heavy metals from aqueous solution by biochars derived from anaerobically digested biomass. Bioresource Technology, 2012, 110, 50-56.	4.8	627
10	Engineered Biochar Reclaiming Phosphate from Aqueous Solutions: Mechanisms and Potential Application as a Slow-Release Fertilizer. Environmental Science & Technology, 2013, 47, 8700-8708.	4.6	595
11	Effects of feedstock type, production method, and pyrolysis temperature on biochar and hydrochar properties. Chemical Engineering Journal, 2014, 240, 574-578.	6.6	591
12	Hydrogen peroxide modification enhances the ability of biochar (hydrochar) produced from hydrothermal carbonization of peanut hull to remove aqueous heavy metals: Batch and column tests. Chemical Engineering Journal, 2012, 200-202, 673-680.	6.6	578
13	Preparation and characterization of a novel magnetic biochar for arsenic removal. Bioresource Technology, 2013, 130, 457-462.	4.8	563
14	Removal of arsenic by magnetic biochar prepared from pinewood and natural hematite. Bioresource Technology, 2015, 175, 391-395.	4.8	535
15	Synthesis of porous MgO-biochar nanocomposites for removal of phosphate and nitrate from aqueous solutions. Chemical Engineering Journal, 2012, 210, 26-32.	6.6	521
16	Simultaneous Immobilization of Lead and Atrazine in Contaminated Soils Using Dairy-Manure Biochar. Environmental Science & Technology, 2011, 45, 4884-4889.	4.6	503
17	Biochar derived from anaerobically digested sugar beet tailings: Characterization and phosphate removal potential. Bioresource Technology, 2011, 102, 6273-6278.	4.8	495
18	Biochar technology in wastewater treatment: A critical review. Chemosphere, 2020, 252, 126539.	4.2	482

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19	Removal of phosphate from aqueous solution by biochar derived from anaerobically digested sugar beet tailings. Journal of Hazardous Materials, 2011, 190, 501-507.	6.5	471
20	Removal of Cu, Zn, and Cd from aqueous solutions by the dairy manure-derived biochar. Environmental Science and Pollution Research, 2013, 20, 358-368.	2.7	460
21	Batch and column sorption of arsenic onto iron-impregnated biochar synthesized through hydrolysis. Water Research, 2015, 68, 206-216.	5.3	448
22	Removal of Pb(II), Cu(II), and Cd(II) from aqueous solutions by biochar derived from KMnO4 treated hickory wood. Bioresource Technology, 2015, 197, 356-362.	4.8	436
23	Carbon-Based Adsorbents for Postcombustion CO₂ Capture: A Critical Review. Environmental Science & Technology, 2016, 50, 7276-7289.	4.6	430
24	Catechol and Humic Acid Sorption onto a Range of Laboratory-Produced Black Carbons (Biochars). Environmental Science & Technology, 2010, 44, 6189-6195.	4.6	406
25	Minireview of potential applications of hydrochar derived from hydrothermal carbonization of biomass. Journal of Industrial and Engineering Chemistry, 2018, 57, 15-21.	2.9	405
26	Removal of arsenic, methylene blue, and phosphate by biochar/AlOOH nanocomposite. Chemical Engineering Journal, 2013, 226, 286-292.	6.6	389
27	Adsorption of emerging contaminants from water and wastewater by modified biochar: A review. Environmental Pollution, 2021, 273, 116448.	3.7	382
28	Aggregation Kinetics of Graphene Oxides in Aqueous Solutions: Experiments, Mechanisms, and Modeling. Langmuir, 2013, 29, 15174-15181.	1.6	381
29	Biochar amendment improves crop production in problem soils: A review. Journal of Environmental Management, 2019, 232, 8-21.	3.8	377
30	Biochar from anaerobically digested sugarcane bagasse. Bioresource Technology, 2010, 101, 8868-8872.	4.8	371
31	Biochar-supported zerovalent iron for removal of various contaminants from aqueous solutions. Bioresource Technology, 2014, 152, 538-542.	4.8	349
32	Removal of lead, copper, cadmium, zinc, and nickel from aqueous solutions by alkali-modified biochar: Batch and column tests. Journal of Industrial and Engineering Chemistry, 2016, 33, 239-245.	2.9	349
33	Removal of sulfamethoxazole and ciprofloxacin from aqueous solutions by graphene oxide. Journal of Hazardous Materials, 2015, 282, 201-207.	6.5	337
34	Sorption of heavy metals on chitosan-modified biochars and its biological effects. Chemical Engineering Journal, 2013, 231, 512-518.	6.6	325
35	Manganese oxide-modified biochars: Preparation, characterization, and sorption of arsenate and lead. Bioresource Technology, 2015, 181, 13-17.	4.8	325
36	Recent advances in engineered biochar productions and applications. Critical Reviews in Environmental Science and Technology, 2017, 47, 2158-2207.	6.6	318

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37	Effects of ball milling on the physicochemical and sorptive properties of biochar: Experimental observations and governing mechanisms. Environmental Pollution, 2018, 233, 54-63.	3.7	314
38	Characterization and environmental applications of clayâ€“biochar composites. Chemical Engineering Journal, 2014, 242, 136-143.	6.6	313
39	Biochar-supported nZVI (nZVI/BC) for contaminant removal from soil and water: A critical review. Journal of Hazardous Materials, 2019, 373, 820-834.	6.5	307
40	Carbon dioxide capture using biochar produced from sugarcane bagasse and hickory wood. Chemical Engineering Journal, 2014, 249, 174-179.	6.6	303
41	Pyrolytic temperatures impact lead sorption mechanisms by bagasse biochars. Chemosphere, 2014, 105, 68-74.	4.2	299
42	Integrated adsorption and photocatalytic degradation of volatile organic compounds (VOCs) using carbon-based nanocomposites: A critical review. Chemosphere, 2019, 218, 845-859.	4.2	299
43	Ball milling as a mechanochemical technology for fabrication of novel biochar nanomaterials. Bioresource Technology, 2020, 312, 123613.	4.8	293
44	Removal of lead(II) from aqueous solution by adsorption onto manganese oxide-coated carbon nanotubes. Separation and Purification Technology, 2007, 58, 17-23.	3.9	290
45	Removal of Cu(II), Cd(II) and Pb(II) ions from aqueous solutions by biochars derived from potassium-rich biomass. Journal of Cleaner Production, 2018, 180, 437-449.	4.6	278
46	Carbon nanotubes/titanium dioxide (CNTs/TiO2) nanocomposites prepared by conventional and novel surfactant wrapping solâ€“gel methods exhibiting enhanced photocatalytic activity. Applied Catalysis B: Environmental, 2009, 89, 503-509.	10.8	276
47	Synthesis, characterization, and dye sorption ability of carbon nanotubeâ€“biochar nanocomposites. Chemical Engineering Journal, 2014, 236, 39-46.	6.6	276
48	Carbon Dots with Red Emission for Sensing of Pt²⁺, Au³⁺, and Pd²⁺ and Their Bioapplications in Vitro and in Vivo. ACS Applied Materials & Interfaces, 2018, 10, 1147-1154.	4.0	272
49	The Interfacial Behavior between Biochar and Soil Minerals and Its Effect on Biochar Stability. Environmental Science & Technology, 2016, 50, 2264-2271.	4.6	268
50	Adsorptive removal of arsenate from aqueous solutions by biochar supported zero-valent iron nanocomposite: Batch and continuous flow tests. Journal of Hazardous Materials, 2017, 322, 172-181.	6.5	263
51	Experimental and modeling investigations of ball-milled biochar for the removal of aqueous methylene blue. Chemical Engineering Journal, 2018, 335, 110-119.	6.6	262
52	Environmental occurrences, fate, and impacts of microplastics. Ecotoxicology and Environmental Safety, 2019, 184, 109612.	2.9	259
53	Engineered carbon (biochar) prepared by direct pyrolysis of Mg-accumulated tomato tissues: Characterization and phosphate removal potential. Bioresource Technology, 2013, 138, 8-13.	4.8	257
54	Effects of chemical oxidation on surface oxygen-containing functional groups and adsorption behavior of biochar. Chemosphere, 2018, 207, 33-40.	4.2	257

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55	Alginate-based composites for environmental applications: a critical review. Critical Reviews in Environmental Science and Technology, 2019, 49, 318-356.	6.6	253
56	Waste-derived biochar for water pollution control and sustainable development. Nature Reviews Earth & Environment, 2022, 3, 444-460.	12.2	233
57	Phosphate removal ability of biochar/MgAl-LDH ultra-fine composites prepared by liquid-phase deposition. Chemosphere, 2013, 92, 1042-1047.	4.2	232
58	Adsorption of sulfamethoxazole on biochar and its impact on reclaimed water irrigation. Journal of Hazardous Materials, 2012, 209-210, 408-413.	6.5	229
59	Functionalizing biochar with Mgâ€“Al and Mgâ€“Fe layered double hydroxides for removal of phosphate from aqueous solutions. Journal of Industrial and Engineering Chemistry, 2017, 47, 246-253.	2.9	211
60	Enhanced Lead Sorption by Biochar Derived from Anaerobically Digested Sugarcane Bagasse. Separation Science and Technology, 2011, 46, 1950-1956.	1.3	206
61	Adsorption and desorption of ammonium by maple wood biochar as a function of oxidation and pH. Chemosphere, 2015, 138, 120-126.	4.2	206
62	SMART biochar technologyâ€"A shifting paradigm towards advanced materials and healthcare research. Environmental Technology and Innovation, 2015, 4, 206-209.	3.0	206
63	Physicochemical and sorptive properties of biochars derived from woody and herbaceous biomass. Chemosphere, 2015, 134, 257-262.	4.2	198
64	Straining of colloidal particles in saturated porous media. Water Resources Research, 2006, 42, .	1.7	193
65	Synthesis, characterization, and environmental implications of graphene-coated biochar. Science of the Total Environment, 2012, 435-436, 567-572.	3.9	189
66	Biochar for volatile organic compound (VOC) removal: Sorption performance and governing mechanisms. Bioresource Technology, 2017, 245, 606-614.	4.8	189
67	A sustainable biochar catalyst synergized with copper heteroatoms and CO₂ for singlet oxygenation and electron transfer routes. Green Chemistry, 2019, 21, 4800-4814.	4.6	188
68	Ball-Milled Carbon Nanomaterials for Energy and Environmental Applications. ACS Sustainable Chemistry and Engineering, 2017, 5, 9568-9585.	3.2	187
69	Carbon nanotube/titanium dioxide (CNT/TiO2) coreâ€“shell nanocomposites with tailored shell thickness, CNT content and photocatalytic/photoelectrocatalytic properties. Applied Catalysis B: Environmental, 2011, 110, 50-57.	10.8	184
70	Hydrochars derived from plant biomass under various conditions: Characterization and potential applications and impacts. Chemical Engineering Journal, 2015, 267, 253-259.	6.6	184
71	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
72	Transport, retention, and size perturbation of graphene oxide in saturated porous media: Effects of input concentration and grain size. Water Research, 2015, 68, 24-33.	5.3	176

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73	Enhanced adsorption performance and governing mechanisms of ball-milled biochar for the removal of volatile organic compounds (VOCs). Chemical Engineering Journal, 2020, 385, 123842.	6.6	176
74	Transport of engineered nanoparticles in saturated porous media. Journal of Nanoparticle Research, 2010, 12, 2371-2380.	0.8	173
75	Humic Acid Facilitates the Transport of ARS-Labeled Hydroxyapatite Nanoparticles in Iron Oxyhydroxide-Coated Sand. Environmental Science & Technology, 2012, 46, 2738-2745.	4.6	172
76	Enhanced lead and cadmium removal using biochar-supported hydrated manganese oxide (HMO) nanoparticles: Behavior and mechanism. Science of the Total Environment, 2018, 616-617, 1298-1306.	3.9	163
77	In-situ fabrication of needle-shaped MIL-53(Fe) with 1T-MoS2 and study on its enhanced photocatalytic mechanism of ibuprofen. Chemical Engineering Journal, 2019, 359, 254-264.	6.6	157
78	Removal of hexavalent chromium by biochar supported nZVI composite: Batch and fixed-bed column evaluations, mechanisms, and secondary contamination prevention. Chemosphere, 2019, 217, 85-94.	4.2	156
79	Ball milled biochar effectively removes sulfamethoxazole and sulfapyridine antibiotics from water and wastewater. Environmental Pollution, 2020, 258, 113809.	3.7	156
80	Rapid and highly selective removal of lead from water using graphene oxide-hydrated manganese oxide nanocomposites. Journal of Hazardous Materials, 2016, 314, 32-40.	6.5	155
81	ZnO/biochar nanocomposites via solvent free ball milling for enhanced adsorption and photocatalytic degradation of methylene blue. Journal of Hazardous Materials, 2021, 415, 125511.	6.5	149
82	Transport of polystyrene nanoplastics in natural soils: Effect of soil properties, ionic strength and cation type. Science of the Total Environment, 2020, 707, 136065.	3.9	148
83	Facile ball-milling synthesis of CeO2/g-C3N4 Z-scheme heterojunction for synergistic adsorption and photodegradation of methylene blue: Characteristics, kinetics, models, and mechanisms. Chemical Engineering Journal, 2021, 420, 127719.	6.6	148
84	Adsorption of tetracycline hydrochloride onto ball-milled biochar: Governing factors and mechanisms. Chemosphere, 2020, 255, 127057.	4.2	146
85	Continuous immobilization of cadmium and lead in biochar amended contaminated paddy soil: A five-year field experiment. Ecological Engineering, 2016, 93, 1-8.	1.6	145
86	Chemically activated hydrochar as an effective adsorbent for volatile organic compounds (VOCs). Chemosphere, 2019, 218, 680-686.	4.2	145
87	Immobilization of hexavalent chromium in contaminated soils using biochar supported nanoscale iron sulfide composite. Chemosphere, 2018, 194, 360-369.	4.2	144
88	Removal mechanisms of Cr(VI) and Cr(III) by biochar supported nanosized zero-valent iron: Synergy of adsorption, reduction and transformation. Environmental Pollution, 2020, 265, 115018.	3.7	142
89	Sorption and cosorption of lead and sulfapyridine on carbon nanotube-modified biochars. Environmental Science and Pollution Research, 2015, 22, 1868-1876.	2.7	139
90	Interfacial coupling effects in g-C3N4/SrTiO3 nanocomposites with enhanced H2 evolution under visible light irradiation. Applied Catalysis B: Environmental, 2019, 247, 1-9.	10.8	139

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91	Sorption and desorption of Pb(II) to biochar as affected by oxidation and pH. Science of the Total Environment, 2018, 634, 188-194.	3.9	138
92	High efficiency and selectivity of MgFe-LDH modified wheat-straw biochar in the removal of nitrate from aqueous solutions. Journal of the Taiwan Institute of Chemical Engineers, 2016, 63, 312-317.	2.7	137
93	Reclaiming phosphorus from secondary treated municipal wastewater with engineered biochar. Chemical Engineering Journal, 2019, 362, 460-468.	6.6	136
94	Ball milling biochar iron oxide composites for the removal of chromium (Cr(VI)) from water: Performance and mechanisms. Journal of Hazardous Materials, 2021, 413, 125252.	6.5	135
95	Solvent-free synthesis of magnetic biochar and activated carbon through ball-mill extrusion with Fe3O4 nanoparticles for enhancing adsorption of methylene blue. Science of the Total Environment, 2020, 722, 137972.	3.9	131
96	Review of key factors controlling engineered nanoparticle transport in porous media. Journal of Hazardous Materials, 2016, 318, 233-246.	6.5	129
97	Sorption of lead and methylene blue onto hickory biochars from different pyrolysis temperatures: Importance of physicochemical properties. Journal of Industrial and Engineering Chemistry, 2016, 37, 261-267.	2.9	128
98	Effects of graphene on seed germination and seedling growth. Journal of Nanoparticle Research, 2015, 17, 1.	0.8	126
99	Deposition and transport of graphene oxide in saturated and unsaturated porous media. Chemical Engineering Journal, 2013, 229, 444-449.	6.6	120
100	Removal of levofloxacin from aqueous solution using rice-husk and wood-chip biochars. Chemosphere, 2016, 150, 694-701.	4.2	119
101	Effects of pH and ionic strength on sulfamethoxazole and ciprofloxacin transport in saturated porous media. Journal of Contaminant Hydrology, 2011, 126, 29-36.	1.6	118
102	Entrapment of ball-milled biochar in Ca-alginate beads for the removal of aqueous Cd(II). Journal of Industrial and Engineering Chemistry, 2018, 61, 161-168.	2.9	116
103	Biochar/iron (BC/Fe) composites for soil and groundwater remediation: Synthesis, applications, and mechanisms. Chemosphere, 2020, 246, 125609.	4.2	115
104	Slow-release fertilizer encapsulated by graphene oxide films. Chemical Engineering Journal, 2014, 255, 107-113.	6.6	114
105	Sorption of perfluorooctanoic acid, perfluorooctane sulfonate and perfluoroheptanoic acid on granular activated carbon. Chemosphere, 2016, 144, 2336-2342.	4.2	113
106	Sustainable remediation with an electroactive biochar system: mechanisms and perspectives. Green Chemistry, 2020, 22, 2688-2711.	4.6	109
107	Rainfall induced chemical transport from soil to runoff: theory and experiments. Journal of Hydrology, 2004, 295, 291-304.	2.3	108
108	Carbon dioxide capture using various metal oxyhydroxideâ€“biochar composites. Chemical Engineering Journal, 2016, 283, 826-832.	6.6	105

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109	Thiol-modified biochar synthesized by a facile ball-milling method for enhanced sorption of inorganic Hg2+ and organic CH3Hg+. Journal of Hazardous Materials, 2020, 384, 121357.	6.5	102
110	Adsorptional-photocatalytic removal of fast sulphon black dye by using chitin-cl-poly(itaconic) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 2021, 416, 125714.	6.5	102
111	Mechanisms and adsorption capacities of hydrogen peroxide modified ball milled biochar for the removal of methylene blue from aqueous solutions. Bioresource Technology, 2021, 337, 125432.	4.8	99
112	Colloid Deposition and Release in Soils and Their Association With Heavy Metals. Critical Reviews in Environmental Science and Technology, 2011, 41, 336-372.	6.6	98
113	Engineered Biochar from Biofuel Residue: Characterization and Its Silver Removal Potential. ACS Applied Materials & Interfaces, 2015, 7, 10634-10640.	4.0	98
114	Magnetic-Sensitive Nanoparticle Self-Assembled Superhydrophobic Biopolymer-Coated Slow-Release Fertilizer: Fabrication, Enhanced Performance, and Mechanism. ACS Nano, 2019, 13, 3320-3333.	7.3	98
115	Fire Phoenix facilitates phytoremediation of PAH-Cd co-contaminated soil through promotion of beneficial rhizosphere bacterial communities. Environment International, 2020, 136, 105421.	4.8	98
116	Phosphogypsum as a novel modifier for distillers grains biochar removal of phosphate from water. Chemosphere, 2020, 238, 124684.	4.2	97
117	Environmental-friendly coal gangue-biochar composites reclaiming phosphate from water as a slow-release fertilizer. Science of the Total Environment, 2021, 758, 143664.	3.9	97
118	Filtration and transport of heavy metals in graphene oxide enabled sand columns. Chemical Engineering Journal, 2014, 257, 248-252.	6.6	96
119	Bio-based elastic polyurethane for controlled-release urea fertilizer: Fabrication, properties, swelling and nitrogen release characteristics. Journal of Cleaner Production, 2019, 209, 528-537.	4.6	96
120	High mobility of SDBS-dispersed single-walled carbon nanotubes in saturated and unsaturated porous media. Journal of Hazardous Materials, 2011, 186, 1766-1772.	6.5	95
121	Enhanced removal of hexavalent chromium by engineered biochar composite fabricated from phosphogypsum and distillers grains. Science of the Total Environment, 2019, 697, 134119.	3.9	93
122	Engineered biochar for environmental decontamination in aquatic and soil systems: a review. , 2022, 1, .		93
123	MgO modified biochar produced through ball milling: A dual-functional adsorbent for removal of different contaminants. Chemosphere, 2020, 243, 125344.	4.2	91
124	Bio-based Interpenetrating Network Polymer Composites from Locust Sawdust as Coating Material for Environmentally Friendly Controlled-Release Urea Fertilizers. Journal of Agricultural and Food Chemistry, 2016, 64, 5692-5700.	2.4	90
125	Effects of laboratory biotic aging on the characteristics of biochar and its water-soluble organic products. Journal of Hazardous Materials, 2020, 382, 121071.	6.5	90
126	Removal of sulfamethoxazole and sulfapyridine by carbon nanotubes in fixed-bed columns. Chemosphere, 2013, 90, 2597-2605.	4.2	89

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127	Ball milling biochar with ammonia hydroxide or hydrogen peroxide enhances its adsorption of phenyl volatile organic compounds (VOCs). Journal of Hazardous Materials, 2021, 403, 123540.	6.5	89
128	Formation and mechanisms of nano-metal oxide-biochar composites for pollutants removal: A review. Science of the Total Environment, 2021, 767, 145305.	3.9	89
129	Biomimetic Superhydrophobic Biobased Polyurethane-Coated Fertilizer with Atmosphere â€œOuterwearâ€. ACS Applied Materials & Interfaces, 2017, 9, 15868-15879.	4.0	88
130	A novel stabilized carbon-coated nZVI as heterogeneous persulfate catalyst for enhanced degradation of 4-chlorophenol. Environment International, 2020, 138, 105639.	4.8	88
131	Colloid-facilitated Pb transport in two shooting-range soils in Florida. Journal of Hazardous Materials, 2010, 177, 620-625.	6.5	86
132	Enhanced arsenic removal by biochar modified with nickel (Ni) and manganese (Mn) oxyhydroxides. Journal of Industrial and Engineering Chemistry, 2016, 37, 361-365.	2.9	86
133	Superhydrophobic controlled-release fertilizers coated with bio-based polymers with organosilicon and nano-silica modifications. Journal of Materials Chemistry A, 2017, 5, 19943-19953.	5.2	86
134	Facile low-temperature one-step synthesis of pomelo peel biochar under air atmosphere and its adsorption behaviors for Ag(I) and Pb(II). Science of the Total Environment, 2018, 640-641, 73-79.	3.9	86
135	Carbon defects in biochar facilitated nitrogen doping: The significant role of pyridinic nitrogen in peroxymonosulfate activation and ciprofloxacin degradation. Chemical Engineering Journal, 2022, 441, 135864.	6.6	86
136	Investigating raindrop effects on transport of sediment and non-sorbed chemicals from soil to surface runoff. Journal of Hydrology, 2005, 308, 313-320.	2.3	85
137	Sorption of arsenic onto Ni/Fe layered double hydroxide (LDH)-biochar composites. RSC Advances, 2016, 6, 17792-17799.	1.7	85
138	Removal of sulfamethoxazole (SMX) and sulfapyridine (SPY) from aqueous solutions by biochars derived from anaerobically digested bagasse. Environmental Science and Pollution Research, 2018, 25, 25659-25667.	2.7	84
139	Kaolinite Enhances the Stability of the Dissolvable and Undissolvable Fractions of Biochar via Different Mechanisms. Environmental Science & Technology, 2018, 52, 8321-8329.	4.6	84
140	One-pot synthesis and characterization of engineered hydrochar by hydrothermal carbonization of biomass with ZnCl2. Chemosphere, 2020, 254, 126866.	4.2	84
141	Efficient removal of Cd(II) from aqueous solution by pinecone biochar: Sorption performance and governing mechanisms. Environmental Pollution, 2020, 265, 115001.	3.7	83
142	Combined application of biochar and sulfur regulated growth, physiological, antioxidant responses and Cr removal capacity of maize (Zea mays L.) in tannery polluted soils. Journal of Environmental Management, 2020, 259, 110051.	3.8	83
143	Novel biochar-impregnated calcium alginate beads with improved water holding and nutrient retention properties. Journal of Environmental Management, 2018, 209, 105-111.	3.8	81
144	Highly efficient removal of nitrogen and phosphorus in an electrolysis-integrated horizontal subsurface-flow constructed wetland amended with biochar. Water Research, 2018, 139, 301-310.	5.3	80

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145	Synergistic adsorption-photocatalysis processes of graphitic carbon nitrate (g-C3N4) for contaminant removal: Kinetics, models, and mechanisms. Chemical Engineering Journal, 2019, 375, 122019.	6.6	80
146	Invasive plants as potential sustainable feedstocks for biochar production and multiple applications: A review. Resources, Conservation and Recycling, 2021, 164, 105204.	5.3	80
147	Facile Ball-Milling Synthesis of CuO/Biochar Nanocomposites for Efficient Removal of Reactive Red 120. ACS Omega, 2020, 5, 5748-5755.	1.6	79
148	Sorption of arsenate onto magnetic ironâ€"manganese (Feâ€"Mn) biochar composites. RSC Advances, 2015, 5, 67971-67978.	1.7	78
149	Environmentally Friendly Slow-Release Urea Fertilizers Based on Waste Frying Oil for Sustained Nutrient Release. ACS Sustainable Chemistry and Engineering, 2017, 5, 6036-6045.	3.2	77
150	Reduction, detoxification and recycling of solid waste by hydrothermal technology: A review. Chemical Engineering Journal, 2020, 390, 124651.	6.6	76
151	Deposition and mobilization of clay colloids in unsaturated porous media. Water Resources Research, 2004, 40, .	1.7	75
152	Deposition and transport of functionalized carbon nanotubes in water-saturated sand columns. Journal of Hazardous Materials, 2012, 213-214, 265-272.	6.5	74
153	Graphene oxide as filter media to remove levofloxacin and lead from aqueous solution. Chemosphere, 2016, 150, 759-764.	4.2	74
154	Biochar-supported zerovalent iron reclaims silver from aqueous solution to form antimicrobial nanocomposite. Chemosphere, 2014, 117, 801-805.	4.2	73
155	Biochar-supported carbon nanotube and graphene oxide nanocomposites for Pb(<scp>ii</scp>) and Cd(<scp>ii</scp>) removal. RSC Advances, 2016, 6, 24314-24319.	1.7	73
156	Microplastic pollution in soils and groundwater: Characteristics, analytical methods and impacts. Chemical Engineering Journal, 2021, 425, 131870.	6.6	73
157	Investigating ponding depth and soil detachability for a mechanistic erosion model using a simple experiment. Journal of Hydrology, 2003, 277, 116-124.	2.3	72
158	Grain Surfaceâ€Roughness Effects on Colloidal Retention in the Vadose Zone. Vadose Zone Journal, 2009, 8, 11-20.	1.3	72
159	Comparative study of calcium alginate, ball-milled biochar, and their composites on aqueousÂmethylene blue adsorption. Environmental Science and Pollution Research, 2019, 26, 11535-11541.	2.7	72
160	Sorption and cosorption of lead (II) and methylene blue on chemically modified biomass. Bioresource Technology, 2014, 167, 569-573.	4.8	71
161	Removal of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) from water by carbonaceous nanomaterials: A review. Critical Reviews in Environmental Science and Technology, 2020, 50, 2379-2414.	6.6	71
162	Pore-scale mechanisms of colloid deposition and mobilization during steady and transient flow through unsaturated granular media. Water Resources Research, 2006, 42, .	1.7	70

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163	Methods of using carbon nanotubes as filter media to remove aqueous heavy metals. Chemical Engineering Journal, 2012, 210, 557-563.	6.6	70
164	Degradation of anthraquinone dye reactive blue 19 using persulfate activated with Fe/Mn modified biochar: Radical/non-radical mechanisms and fixed-bed reactor study. Science of the Total Environment, 2021, 758, 143584.	3.9	70
165	Siloxane and polyether dual modification improves hydrophobicity and interpenetrating polymer network of bio-polymer for coated fertilizers with enhanced slow release characteristics. Chemical Engineering Journal, 2018, 350, 1125-1134.	6.6	69
166	Simultaneous reclaiming phosphate and ammonium from aqueous solutions by calcium alginate-biochar composite: Sorption performance and governing mechanisms. Chemical Engineering Journal, 2022, 429, 132166.	6.6	69
167	Ibuprofen degradation by a synergism of facet-controlled MIL-88B(Fe) and persulfate under simulated visible light. Journal of Colloid and Interface Science, 2022, 612, 1-12.	5.0	69
168	Synthesis of a multifunctional grapheneâ€“carbon nanotube aerogel and its strong adsorption of lead from aqueous solution. RSC Advances, 2013, 3, 21099.	1.7	67
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