Liyuan Chai

List of Publications by Year in descending order

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117 papers	6,166 citations	61984 43 h-index	76900 74 g-index
119 all docs	119 docs citations	119 times ranked	7125 citing authors

#	Article	IF	CITATIONS
1	Characterization and genomic analysis of kraft lignin biodegradation by the beta-proteobacterium Cupriavidus basilensis B-8. Biotechnology for Biofuels, 2013, 6, 1.	6.2	612
2	Synthesis of Core–Shell Magnetic Fe ₃ O ₄ @poly(<i>m</i> -Phenylenediamine) Particles for Chromium Reduction and Adsorption. Environmental Science & Envir	10.0	339
3	Sulfate-doped Fe3O4/Al2O3 nanoparticles as a novel adsorbent for fluoride removal from drinking water. Water Research, 2013, 47, 4040-4049.	11.3	278
4	Heavy metals and metalloids in the surface sediments of the Xiangjiang River, Hunan, China: distribution, contamination, and ecological risk assessment. Environmental Science and Pollution Research, 2017, 24, 874-885.	5.3	170
5	Bioleaching remediation of heavy metal-contaminated soils using Burkholderia sp. Z-90. Journal of Hazardous Materials, 2016, 301, 145-152.	12.4	162
6	Kinetic and mechanistic aspects of hydroxyl radicalâ€'mediated degradation of naproxen and reaction intermediates. Water Research, 2018, 137, 233-241.	11.3	160
7	Porous carbonized graphene-embedded fungus film as an interlayer for superior Li–S batteries. Nano Energy, 2015, 17, 224-232.	16.0	130
8	Cr (VI) remediation by indigenous bacteria in soils contaminated by chromium-containing slag. Journal of Hazardous Materials, 2009, 167, 516-522.	12.4	122
9	Directed bioconversion of Kraft lignin to polyhydroxyalkanoate by Cupriavidus basilensis B-8 without any pretreatment. Process Biochemistry, 2017, 52, 238-242.	3.7	116
10	Preparation of a macroscopic, robust carbon-fiber monolith from filamentous fungi and its application in Liâ \in "S batteries. Green Chemistry, 2014, 16, 3926.	9.0	115
11	UV direct photolysis of sulfamethoxazole and ibuprofen: An experimental and modelling study. Journal of Hazardous Materials, 2018, 343, 132-139.	12.4	114
12	Biochemical investigation of kraft lignin degradation by Pandoraea sp. B-6 isolated from bamboo slips. Bioprocess and Biosystems Engineering, 2013, 36, 1957-1965.	3.4	110
13	Quantitative structure–activity relationships for reactivities of sulfate and hydroxyl radicals with aromatic contaminants through single–electron transfer pathway. Journal of Hazardous Materials, 2018, 344, 1165-1173.	12.4	109
14	High-performance supercapacitor energy storage using a carbon material derived from lignin by bacterial activation before carbonization. Journal of Materials Chemistry A, 2019, 7, 26838-26848.	10.3	96
15	Adsorption of Cr(VI) using synthetic poly(m-phenylenediamine). Journal of Hazardous Materials, 2013, 260, 789-795.	12.4	94
16	Stabilization of arsenic sludge with mechanochemically modified zero valent iron. Chemosphere, 2017, 168, 1142-1151.	8.2	92
17	Cu doped Fe ₃ O ₄ magnetic adsorbent for arsenic: synthesis, property, and sorption application. RSC Advances, 2015, 5, 50011-50018.	3.6	85
18	Mechanistic Study on the Role of Soluble Microbial Products in Sulfate Radical-Mediated Degradation of Pharmaceuticals. Environmental Science & Environmental	10.0	83

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19	Bacteria-enhanced dilute acid pretreatment of lignocellulosic biomass. Bioresource Technology, 2017, 245, 419-425.	9.6	82
20	Preparation and characterization of magnetic Fe3O4/CNT nanoparticles by RPO method to enhance the efficient removal of Cr(VI). Environmental Science and Pollution Research, 2013, 20, 7175-7185.	5.3	81
21	Ingestion risks of metals in groundwater based on TIN model and dose-response assessment — A case study in the Xiangjiang watershed, central-south China. Science of the Total Environment, 2010, 408, 3118-3124.	8.0	74
22	A Cuâ€"m-phenylenediamine complex induced route to fabricate poly(m-phenylenediamine)/reduced graphene oxide hydrogel and its adsorption application. Carbon, 2015, 81, 748-757.	10.3	73
23	Fe-FeS2 adsorbent prepared with iron powder and pyrite by facile ball milling and its application for arsenic removal. Water Science and Technology, 2017, 76, 192-200.	2.5	72
24	Characterization of arsenic serious-contaminated soils from Shimen realgar mine area, the Asian largest realgar deposit in China. Journal of Soils and Sediments, 2016, 16, 1519-1528.	3.0	70
25	pH Manipulation: A Facile Method for Lowering Oxidation State and Keeping Good Yield of Poly(<i>m</i> -phenylenediamine) and Its Powerful Ag ⁺ Adsorption Ability. Langmuir, 2011, 27, 13729-13738.	3.5	69
26	Formation of tooeleite and the role of direct removal of As(III) from high-arsenic acid wastewater. Journal of Hazardous Materials, 2016, 320, 620-627.	12.4	69
27	Multi-omics response of Pannonibacter phragmitetus BB to hexavalent chromium. Environmental Pollution, 2019, 249, 63-73.	7. 5	65
28	Highly Flexible and Porous Nanoparticle-Loaded Films for Dye Removal by Graphene Oxide–Fungus Interaction. ACS Applied Materials & Samp; Interfaces, 2016, 8, 34638-34647.	8.0	63
29	Study on the mechanism of copper–ammonia complex decomposition in struvite formation process and enhanced ammonia and copper removal. Journal of Environmental Sciences, 2017, 51, 222-233.	6.1	63
30	Pandoraea sp. B-6 assists the deep eutectic solvent pretreatment of rice straw via promoting lignin depolymerization. Bioresource Technology, 2018, 257, 62-68.	9.6	63
31	Three-dimensional carbon nanosheets derived from micro-morphologically regulated biomass for ultrahigh-performance supercapacitors. Carbon, 2019, 153, 707-716.	10.3	61
32	Facile and large-scale synthesis of functional poly(m-phenylenediamine) nanoparticles by Cu2+-assisted method with superior ability for dye adsorption. Journal of Materials Chemistry, 2012, 22, 18244.	6.7	60
33	Simultaneous immobilization of lead, cadmium, and arsenic in combined contaminated soil with iron hydroxyl phosphate. Journal of Soils and Sediments, 2017, 17, 432-439.	3.0	57
34	Combination of bioleaching by gross bacterial biosurfactants and flocculation: A potential remediation for the heavy metal contaminated soils. Chemosphere, 2018, 206, 83-91.	8.2	56
35	Arsenic immobilization in the contaminated soil using poorly crystalline Fe-oxyhydroxy sulfate. Environmental Science and Pollution Research, 2015, 22, 12624-12632.	5.3	55
36	Fungus hyphae-supported alumina: An efficient and reclaimable adsorbent for fluoride removal from water. Journal of Colloid and Interface Science, 2017, 496, 496-504.	9.4	53

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37	Adsorption mechanism for removing different species of fluoride by designing of core-shell boehmite. Journal of Hazardous Materials, 2020, 394, 122555.	12.4	51
38	High-resolution analyses reveal structural diversity patterns of microbial communities in Chromite Ore Processing Residue (COPR) contaminated soils. Chemosphere, 2017, 183, 266-276.	8.2	49
39	Two-Dimensional Titanium Carbides (Ti3C2Tx) Functionalized by Poly(m-phenylenediamine) for Efficient Adsorption and Reduction of Hexavalent Chromium. International Journal of Environmental Research and Public Health, 2020, 17, 167.	2.6	49
40	Reduction of high concentrations of chromate by Leucobacter sp. CRB1 isolated from Changsha, China. World Journal of Microbiology and Biotechnology, 2008, 24, 991-996.	3.6	48
41	Structure and spectroscopic study of aqueous Fe(III)-As(V) complexes using UV–Vis, XAS and DFT-TDDFT. Chemosphere, 2017, 182, 595-604.	8.2	48
42	Polydopamine Functionalized Cu Nanowires for Enhanced CO ₂ Electroreduction Towards Methane. ChemElectroChem, 2018, 5, 3991-3999.	3.4	47
43	Formation mechanism of zinc-doped fayalite (Fe2-xZnxSiO4) slag during copper smelting. Journal of Hazardous Materials, 2019, 364, 488-498.	12.4	47
44	Selenium and nitrogen co-doped biochar as a new metal-free catalyst for adsorption of phenol and activation of peroxymonosulfate: Elucidating the enhanced catalytic performance and stability. Journal of Hazardous Materials, 2021, 413, 125294.	12.4	46
45	Simultaneous immobilization of cadmium and lead in contaminated soils by hybrid bio-nanocomposites of fungal hyphae and nano-hydroxyapatites. Environmental Science and Pollution Research, 2018, 25, 11970-11980.	5.3	45
46	Mechanistic Understanding of Superoxide Radical-Mediated Degradation of Perfluorocarboxylic Acids. Environmental Science & Echnology, 2022, 56, 624-633.	10.0	45
47	Effect of the electronegativity on the electrosorption selectivity of anions during capacitive deionization. Chemosphere, 2018, 195, 282-290.	8.2	44
48	Synthesis of thiol-functionalized spent grain as a novel adsorbent for divalent metal ions. Bioresource Technology, 2010, 101, 6269-6272.	9.6	43
49	Graphene@poly(m-phenylenediamine) hydrogel fabricated by a facile post-synthesis assembly strategy. Chemical Communications, 2013, 49, 9974.	4.1	43
50	A novel model to predict gas–phase hydroxyl radical oxidation kinetics of polychlorinated compounds. Chemosphere, 2017, 172, 333-340.	8.2	43
51	Combination of microbial oxidation and biogenic schwertmannite immobilization: A potential remediation for highly arsenic-contaminated soil. Chemosphere, 2017, 181, 1-8.	8.2	43
52	Preparation of stable and high-efficient poly(m-phenylenediamine)/reduced graphene oxide composites for hexavalent chromium removal. Journal of Materials Science, 2019, 54, 383-395.	3.7	41
53	Selective removal of Clâ-' and Fâ-' from complex solution via electrochemistry deionization with bismuth/reduced graphene oxide composite electrode. Chemosphere, 2020, 251, 126319.	8.2	41
54	Complexation of arsenate with ferric ion in aqueous solutions. RSC Advances, 2015, 5, 103936-103942.	3.6	39

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55	Discerning three novel chromate reduce and transport genes of highly efficient Pannonibacter phragmitetus BB: From genome to gene and protein. Ecotoxicology and Environmental Safety, 2018, 162, 139-146.	6.0	38
56	Bioconversion of lignin into bioplastics by Pandoraea sp. B-6: molecular mechanism. Environmental Science and Pollution Research, 2019, 26, 2761-2770.	5. 3	38
57	Formation of abiological granular sludge – A facile and bioinspired proposal for improving sludge settling performance during heavy metal wastewater treatment. Chemosphere, 2014, 113, 36-41.	8.2	36
58	Biotreatment of chromite ore processing residue by Pannonibacter phragmitetus BB. Environmental Science and Pollution Research, 2013, 20, 5593-5602.	5.3	34
59	Stabilization of Cd-, Pb-, Cu- and Zn-contaminated calcareous agricultural soil using red mud: a field experiment. Environmental Geochemistry and Health, 2018, 40, 2143-2153.	3.4	34
60	Modeling and optimization of lime-based stabilization in high alkaline arsenic-bearing sludges with a central composite design. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2017, 52, 449-458.	1.7	33
61	Selective Removal of Elemental Mercury from High-Concentration SO ₂ Flue Gas by Thiourea Solution and Investigation of Mechanism. Industrial & Engineering Chemistry Research, 2017, 56, 4281-4287.	3.7	33
62	Enhanced stability of tooeleite by hydrothermal method for the fixation of arsenite. Hydrometallurgy, 2018, 175, 93-101.	4.3	33
63	Heap bioleaching of uranium from low-grade granite-type ore by mixed acidophilic microbes. Journal of Radioanalytical and Nuclear Chemistry, 2017, 314, 251-258.	1.5	32
64	Catalytic Oxidation of Elemental Mercury in Coal-Combustion Flue Gas over the CuAlO ₂ Catalyst. Energy & Samp; Fuels, 2019, 33, 11380-11388.	5.1	32
65	Accelerated Degradation of Microplastics at the Liquid Interface of Ice Crystals in Frozen Aqueous Solutions. Angewandte Chemie - International Edition, 2022, 61, .	13.8	31
66	Selenium catalyzed Fe(III)-EDTA reduction by Na2SO3: a reaction-controlled phase transfer catalysis. Environmental Science and Pollution Research, 2016, 23, 8113-8119.	5.3	30
67	Chemical bond between chloride ions and surface carboxyl groups on activated carbon. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 530, 53-59.	4.7	30
68	Capacitive deionization of chloride ions by activated carbon using a three-dimensional electrode reactor. Separation and Purification Technology, 2018, 191, 424-432.	7.9	30
69	The electrochemical selective reduction of NO using CoSe2@CNTs hybrid. Environmental Science and Pollution Research, 2017, 24, 14249-14258.	5.3	29
70	Facile and large-scale synthesis of poly(m-phenylenediamine) nanobelts with high surface area and superior dye adsorption ability. RSC Advances, 2014, 4, 45244-45250.	3.6	28
71	Biosynthesis of schwertmannite by Acidithiobacillus ferrooxidans and its application in arsenic immobilization in the contaminated soil. Journal of Soils and Sediments, 2016, 16, 2430-2438.	3.0	27
72	Nano-functionalized filamentous fungus hyphae with fast reversible macroscopic assembly & Eamp; disassembly features. Chemical Communications, 2015, 51, 8524-8527.	4.1	26

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73	Enhanced removal of $Hg(II)$ from acidic aqueous solution using thiol-functionalized biomass. Water Science and Technology, 2010, 62, 2157-2166.	2.5	25
74	Comparison of the degradation of molecular and ionic ibuprofen in a UV/H2O2 system. Water Science and Technology, 2018, 77, 2174-2183.	2.5	24
75	Complementary effect of combined bacterial-chemical pretreatment to promote enzymatic digestibility of lignocellulose biomass. Bioresource Technology, 2019, 272, 275-280.	9.6	24
76	Kinetics and Thermodynamics of Arsenate and Arsenite Biosorption by Pretreated Spent Grains. Water Environment Research, 2009, 81, 843-848.	2.7	23
77	A Comparative Evaluation of Different Sediment Quality Guidelines for Metal and Metalloid Pollution in the Xiangjiang River, Hunan, China. Archives of Environmental Contamination and Toxicology, 2017, 73, 593-606.	4.1	23
78	Enhanced adsorption-coupled reduction of hexavalent chromium by 2D poly(m-phenylenediamine)-functionalized reduction graphene oxide. Environmental Science and Pollution Research, 2019, 26, 31099-31110.	5. 3	23
79	Sequentially recover heavy metals from smelting wastewater using bioelectrochemical system coupled with thermoelectric generators. Ecotoxicology and Environmental Safety, 2020, 205, 111174.	6.0	23
80	Polyhydroxyalkanoateâ€Modified Bacterium Regulates Biomass Structure and Promotes Synthesis of Carbon Materials for Highâ€Performance Supercapacitors. ChemSusChem, 2019, 12, 1732-1742.	6.8	22
81	Effect of Precipitant Additives on the Sludge Settling and Compacting Performance for Heavy Metal Wastewater Treatment. Separation Science and Technology, 2013, 48, 1442-1449.	2.5	21
82	Silver nanocrystals with special shapes: controlled synthesis and their surface-enhanced Raman scattering properties. RSC Advances, 2014, 4, 98-104.	3.6	21
83	Sustainable synthesis of hollow Cu-loaded poly(m-phenylenediamine) particles and their application for arsenic removal. RSC Advances, 2015, 5, 29965-29974.	3.6	21
84	Mercury Re-Emission in the Smelting Flue Gas Cleaning Process: The Influence of Arsenite. Energy & Ene	5.1	20
85	Seasonal and spatial contamination statuses and ecological risk of sediment cores highly contaminated by heavy metals and metalloids in the Xiangjiang River. Environmental Geochemistry and Health, 2019, 41, 1617-1633.	3.4	20
86	Hydroxylamine addition enhances fast recovery of anammox activity suffering Cr(VI) inhibition. Bioresource Technology, 2021, 329, 124920.	9.6	20
87	Uranium bioleaching from low-grade carbonaceous-siliceous-argillaceous type uranium ore using an indigenous Acidithiobacillus ferrooxidans. Journal of Radioanalytical and Nuclear Chemistry, 2018, 317, 1033-1040.	1.5	18
88	Ultrastrong Anion Affinity of Anionic Clay Induced by Its Inherent Nanoconfinement. Environmental Science & Environmental Scie	10.0	18
89	How Pyrite Interacts with Anammox: Mechanisms and Application. ACS ES&T Water, 2022, 2, 495-507.	4.6	18
90	Design of a high-performance ternary LDHs containing Ni, Co and Mn for arsenate removal. Journal of Hazardous Materials, 2022, 427, 127865.	12.4	17

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91	Assessment of the stability of chromium in remedied soils by Pannonibacter phragmitetus BB and its risk to groundwater. Journal of Soils and Sediments, 2014, 14, 1098-1106.	3.0	15
92	High-yield synthesis of poly(m-phenylenediamine) hollow nanostructures by a diethanolamine-assisted method and their enhanced ability for Ag+ adsorption. New Journal of Chemistry, 2014, 38, 3984-3991.	2.8	15
93	Methanol-induced formation of 1D poly(m-phenylenediamine) by conventional chemical oxidative polymerization exhibiting superior Ag+ adsorption ability. RSC Advances, 2013, 3, 8660.	3.6	14
94	The study of a pilot-scale aerobic/Fenton/anoxic/aerobic process system for the treatment of landfill leachate. Environmental Technology (United Kingdom), 2018, 39, 1926-1936.	2.2	14
95	Structural substitution for SO4 group in tooeleite crystal by As(V) and As(III) oxoanions and the environmental implications. Chemosphere, 2018, 213, 305-313.	8.2	13
96	Phase separation of co-solvent promotes multiple bio-nanomaterials conversion from natural lignocellulose. Industrial Crops and Products, 2020, 152, 112469.	5.2	13
97	Abiological Granular Sludge Formation Benefit for Heavy Metal Wastewater Treatment Using Sulfide Precipitation. Clean - Soil, Air, Water, 2017, 45, 1500730.	1.1	12
98	Biodeposited Nano-CdS Drives the In Situ Growth of Highly Dispersed Sulfide Nanoparticles during Pyrolysis for Enhanced Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2020, 12, 54553-54562.	8.0	12
99	Characteristics of Chromium Coprecipitation Mediated by Acidithiobacillus ferrooxidans DC. Water, Air, and Soil Pollution, 2014, 225, 1.	2.4	11
100	Effect of the chemical bond on the electrosorption and desorption of anions during capacitive deionization. Chemosphere, 2019, 229, 341-348.	8.2	11
101	Mechanical Activation-Assisted Reductive Leaching of Cadmium from Zinc Neutral Leaching Residue Using Sulfur Dioxide. Jom, 2015, 67, 3010-3021.	1.9	9
102	Selenium-Assisted Reduction of Sulfur Dioxide by Carbon Monoxide in the Liquid Phase. Industrial & Liquid Phase amp; Engineering Chemistry Research, 2017, 56, 1895-1902.	3.7	9
103	Potential-pH diagram for "Leucobacter sp. Ch-1–Cr–H2O―system. Journal of Hazardous Materials, 2008, 157, 518-524.	12.4	8
104	Seâ€eatalyzed process of sodium bisulfite disproportionation. Journal of Chemical Technology and Biotechnology, 2016, 91, 1023-1030.	3.2	8
105	Systematic Assessment of Health Risk from Metals in Surface Sediment of the Xiangjiang River, China. International Journal of Environmental Research and Public Health, 2020, 17, 1677.	2.6	8
106	Microinteraction Analysis between Heavy Metals and Coexisting Phases in Heavy Metal Containing Solid Wastes. ACS ES&T Engineering, 2022, 2, 547-563.	7.6	8
107	Single-cell transcriptomics uncovers phenotypic alterations in the monocytes in a Chinese population with chronic cadmium exposure. Ecotoxicology and Environmental Safety, 2021, 211, 111881.	6.0	7
108	Enhanced degradation of 1-naphthol in landfill leachate using <i>Arthrobacter</i> sp Environmental Technology (United Kingdom), 2019, 40, 835-842.	2.2	6

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109	Minimizing Fe-Bearing Waste Guided by Modulating the Precipitation Pathway: A Novel Magnetite Precipitation Approach for Zinc Hydrometallurgy. ACS ES&T Engineering, 2022, 2, 1611-1618.	7.6	6
110	An Overlooked Natural Hydrogen Evolution Pathway: Ni ²⁺ Boosting H ₂ O Reduction by Fe(OH) ₂ Oxidation during Lowâ€Temperature Serpentinization. Angewandte Chemie, 2021, 133, 24256-24260.	2.0	5
111	Systematic control technologies for gaseous pollutants from non-ferrous metallurgy. Journal of Environmental Sciences, 2023, 123, 65-82.	6.1	4
112	Automatic detection of Staphylococcus aureus and Shigella dysenteriae with separated electrodes series piezoelectric sensing technique. World Journal of Microbiology and Biotechnology, 2008, 24, 1073-1079.	3. 6	3
113	Preparation of Antibacterial Color-Coated Steel Sheets. International Journal of Photoenergy, 2012, 2012, 1-7.	2.5	3
114	A RQPSO Algorithm for Multiphase Equilibrium Calculation in the KIVCET Process. Jom, 2018, 70, 2893-2899.	1.9	3
115	Isolation and Identification of Two Novel Alkaligenous Arsenic(III)â€Oxidizing Bacteria From a Realgar Mine, China. Clean - Soil, Air, Water, 2017, 45, .	1.1	3
116	Response to Comment on "Mechanistic Understanding of Superoxide Radical-Mediated Degradation of Perfluorocarboxylic Acids― Environmental Science & Environmental Science & 2022, 56, 5289-5291.	10.0	2
117	Cationic Polymeric Networks: 3D Cationic Polymeric Network Nanotrap for Efficient Collection of Perrhenate Anion from Wastewater (Small 20/2021). Small, 2021, 17, 2170094.	10.0	0