Xin Xiao

List of Publications by Year
in descending order

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31 papers	3,434 citations	304743 22 h-index	434195 31 g-index
31 all docs	31 docs citations	31 times ranked	3225 citing authors

#	Article	IF	Citations
1	Insight into Multiple and Multilevel Structures of Biochars and Their Potential Environmental Applications: A Critical Review. Environmental Science & Technology, 2018, 52, 5027-5047.	10.0	593
2	Transformation, Morphology, and Dissolution of Silicon and Carbon in Rice Straw-Derived Biochars under Different Pyrolytic Temperatures. Environmental Science & Technology, 2014, 48, 3411-3419.	10.0	406
3	Rational solvent molecule tuning for high-performance lithium metal battery electrolytes. Nature Energy, 2022, 7, 94-106.	39.5	336
4	Quantification of Chemical States, Dissociation Constants and Contents of Oxygen-containing Groups on the Surface of Biochars Produced at Different Temperatures. Environmental Science & Technology, 2015, 49, 309-317.	10.0	277
5	Sorption of Poly- and Perfluoroalkyl Substances (PFASs) Relevant to Aqueous Film-Forming Foam (AFFF)-Impacted Groundwater by Biochars and Activated Carbon. Environmental Science & Technology, 2017, 51, 6342-6351.	10.0	239
6	A Direct Observation of the Fine Aromatic Clusters and Molecular Structures of Biochars. Environmental Science & Technology, 2017, 51, 5473-5482.	10.0	173
7	Ultralight and fire-extinguishing current collectors for high-energy and high-safety lithium-ion batteries. Nature Energy, 2020, 5, 786-793.	39.5	168
8	H/C atomic ratio as a smart linkage between pyrolytic temperatures, aromatic clusters and sorption properties of biochars derived from diverse precursory materials. Scientific Reports, 2016, 6, 22644.	3.3	149
9	Scalable, Ultrathin, and Highâ€Temperatureâ€Resistant Solid Polymer Electrolytes for Energyâ€Dense Lithium Metal Batteries. Advanced Energy Materials, 2022, 12, .	19.5	132
10	Application of biochar-based materials in environmental remediation: from multi-level structures to specific devices. Biochar, 2020, 2, 1-31.	12.6	118
11	Dynamic spatial progression of isolated lithium during battery operations. Nature, 2021, 600, 659-663.	27.8	111
12	Environmental Effects of Silicon within Biochar (Sichar) and Carbonâ€“Silicon Coupling Mechanisms: A Critical Review. Environmental Science & Technology, 2019, 53, 13570-13582.	10.0	91
13	Destruction of Per- and Polyfluoroalkyl Substances (PFASs) in Aqueous Film-Forming Foam (AFFF) with UV-Sulfite Photoreductive Treatment. Environmental Science & Technology, 2020, 54, 6957-6967.	10.0	88
14	All-Solid-State Lithiumâ€“Sulfur Batteries Enhanced by Redox Mediators. Journal of the American Chemical Society, 2021, 143, 18188-18195.	13.7	66
15	Reductive Defluorination of Branched Per- and Polyfluoroalkyl Substances with Cobalt Complex Catalysts. Environmental Science and Technology Letters, 2018, 5, 289-294.	8.7	65
16	Sugar Cane-Converted Graphene-like Material for the Superhigh Adsorption of Organic Pollutants from Water via Coassembly Mechanisms. Environmental Science & Technology, 2017, 51, 12644-12652.	10.0	63
17	pH-dependent sorption of sulfonamide antibiotics onto biochars: Sorption mechanisms and modeling. Environmental Pollution, 2019, 248, 48-56.	7.5	61
18	Air-Filtering Masks for Respiratory Protection from PM2.5 and Pandemic Pathogens. One Earth, 2020, 3, 574-589.	6.8	60

#	Article	IF	Citations
19	Novel insights into effects of silicon-rich biochar (Sichar) amendment on cadmium uptake, translocation and accumulation in rice plants. Environmental Pollution, 2020, 265, 114772.	7.5	42
20	Biochar Impacts on Soil Silicon Dissolution Kinetics and their Interaction Mechanisms. Scientific Reports, 2018, 8, 8040.	3.3	39
21	Effects of biochar amendment on the soil silicon cycle in a soil-rice ecosystem. Environmental Pollution, 2019, 248, 823-833.	7.5	30
22	Incorporating the Nanoscale Encapsulation Concept from Liquid Electrolytes into Solid-State Lithiumâ€“Sulfur Batteries. Nano Letters, 2020, 20, 5496-5503.	9.1	30
23	Tuning Fluorination of Linear Carbonate for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2022, 169, 040555.	2.9	24
24	Selective Separation Catalysis Membrane for Highly Efficient Water and Soil Decontamination via a Persulfate-Based Advanced Oxidation Process. Environmental Science & Technology, 2022, 56, 3234-3244.	10.0	20
25	Designing a Nanoscale Three-phase Electrochemical Pathway to Promote Pt-catalyzed Formaldehyde Oxidation. Nano Letters, 2020, 20, 8719-8724.	9.1	15
26	Selectively coupled small Pd nanoparticles on sp2-hybridized domain of graphene-based aerogel with enhanced catalytic activity and stability. Science of the Total Environment, 2021, 771, 145396.	8.0	11
27	Self-assembled fungus-biochar composite pellets (FBPs) for enhanced co-sorption-biodegradation towards phenanthrene. Chemosphere, 2022, 286, 131887.	8.2	11
28	Proton uptake behaviors of organic and inorganic matters in biochars prepared under different pyrolytic temperatures. Science of the Total Environment, 2020, 746, 140853.	8.0	6
29	Interaction Mechanisms between Biochar and Organic Pollutants. SSSA Special Publication Series, 2015, , 225-257.	0.2	4
30	Facile nitrogen doping in fungal hyphae-derived biochars via cooperation of microbial culture and pyrolysis for efficient catalytic reduction of 4-nitrophenol. Chemosphere, 2022, 300, 134526.	8.2	4
31	Sensitive, portable heavy-metal-ion detection by the sulfidation method on a superhydrophobic concentrator (SPOT). One Earth, 2021, 4, 756-766.	6.8	2