

## **Biochar remediation of inorganic contaminants in soils**

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### **Abstract**

The use of biochar in the remediation of soils contaminated with inorganic pollutants has widely grown in the past decades due to the availability of cheap and diverse feedstocks for biochar production. Although several efforts are available on the application of biochar on soils, they give much attention to the improvement of soil quality rather than the decontamination of pollutants in soils. Abundant research exists on using biochar in the reclamation of soils, which requires comprehensive summarization. Hence, this chapter provides a summary of the research progress on (1) the occurrence of inorganic pollutants in soils; (2) biochar removal of inorganic contaminants in soils and their mechanisms; (3) the behavior and fate of metals and nutrients in soils; and (4) challenges and hotspots for future research directions. Biochar's removal efficiency of inorganic contaminants is influenced by its characteristics, molecular composition, and physical architecture, which are influenced by preparation conditions.