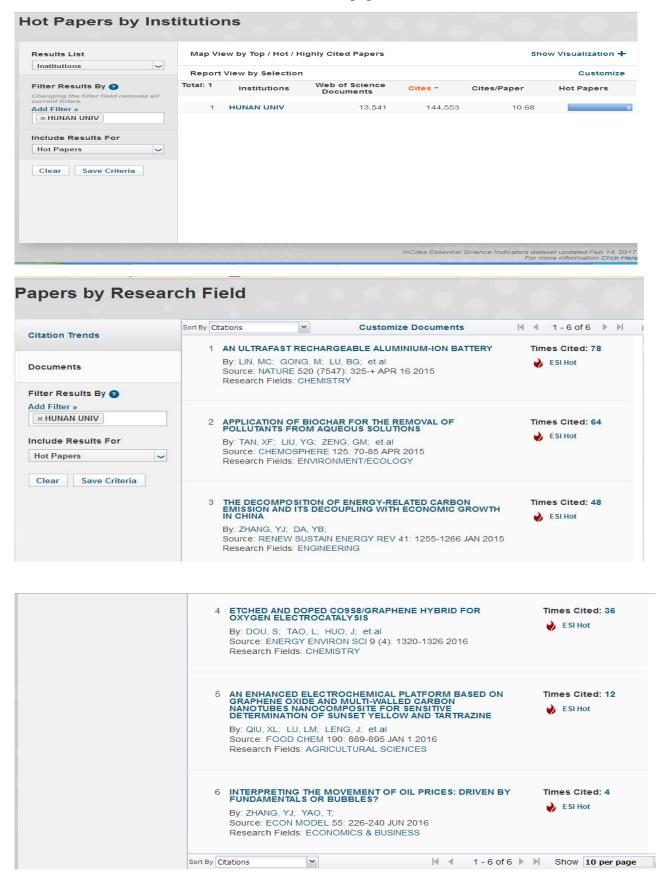
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Application of biochar for the removal of pollutants from aqueous solutions

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摘要

In recent years, many studies have been devoted to investigate the application of biochar for pollutants removal from aqueous solutions. Biochar exhibits a great potential to efficiently tackle water contaminants considering the wide availability of feedstock, low-cost and favorable physical/chemical surface characteristics. This review provides an overview of biochar production technologies, biochar properties, and recent advances in the removal of heavy metals, organic pollutants and other inorganic pollutants using biochar. Experimental studies related to the adsorption behaviors of biochar toward various contaminants, key affecting factors and the underlying mechanisms proposed to explain the adsorption behaviors, have been comprehensively reviewed. Furthermore, research gaps and uncertainties that exist in the use of biochar as an adsorbent are identified. Further research needs for biochar and potential areas for future application of biochars are also proposed. (C) 2014 Elsevier Ltd. All rights reserved.

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作者关键词: Biochar; Carbon sequestration; Adsorption; Aqueous solutions; Water pollution; Research

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