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Agricultural biomass-derived magnetic adsorbents: Preparation and application for heavy metals removal (Article)

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Abstract

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This paper discusses the synthesis of magnetic adsorbents from agricultural waste and their applications in heavy metals removal. The general methods for preparing magnetic adsorbents and the mechanisms of heavy metal sorption are also reviewed in detail. These mechanisms are related to the utilization of magnetic adsorbents, particularly sugarcane bagasse in heavy metals removal, such as nickel, cadmium, lead, and arsenic. Converting sugarcane bagasse into magnetic adsorbents could solve environmental problems, such as agricultural waste and water pollution. A brief summary of the synthesis of magnetic biochar from sugarcane bagasse and its applications in heavy metals removal is also presented. Thus, this study proposes magnetic-based materials as potential candidates for wastewater treatment, and this adds new dimensions to numerous applications of the carbon family. © 2017 Taiwan Institute of Chemical Engineers

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Indexed keywords

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