

Use of Biochar in Emerging Contaminant Removal
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Abstract: Biochar is a carbon-based material made by pyrolysis, a process that uses low oxygen and high temperature to degrade organic matter. Adsorbent materials like biochar are used for many different purposes, such as soil remediation or water treatment. Research suggests that biochar's surface characteristics play a significant role in their ability to adsorb contaminants or release nutrients. Additional heat and chemical treatments have also been shown to change the characteristics of biochar, thus changing their performance in certain tasks. This study aims to characterize the effects of a variety of acid and base treatments at different molarities on the surface characteristics of hemp biochar. This was done through FTIR analysis and contact angle measurement tests. Currently, there are no standard protocols for measuring the contact angle for powders and granules made of organic materials like biochar. As such, we plan to introduce a protocol that may be used for carbon-based materials.