Special Issue

Biochar: Preparation and Surface Adsorption Applications

Message from the Guest Editor

Biochar is a carbon-rich product produced by the thermal decomposition of organic material. Since carbonization during the decomposition process is incomplete, biochar contains both carbonized and non-carbonized phases. The organic materials used as feedstock and the selected pyrolysis conditions affect the physical and chemical properties, such as surface area, polarity, and elemental composition, of the resulting biochar. Due to the high degree of porosity, a large surface area, and a large number of functional surface groups, there are various possible environmental applications for biochar. For example, biochar can contribute to soil improvement in agriculture. In livestock farming, biochar can be used as a feed additive, as well as for manure treatment to reduce nuisance odors. Due to its low thermal conductivity and water absorption capacity, biochar has suitable characteristics for use in building construction as an insulating material and moisture control agent. Biochar can also be used to decontaminate polluted soils and water resources.

Guest Editor

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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