UND NORTH DAKOTA

CORPORATE ENGAGEMENT & COMMERCIALIZATION

Method of Producing Highly Porous Adsorbents

UND Technology 18-02 Patent Number US 10,751,697 Date of Issuance: August 25, 2020

Summary

The University of North Dakota has patented a process for producing activated carbon that includes carbonizing an organic material to produce a charcoal, heating the charcoal in a chamber in the presence of oxygen at a temperature in the range of 400 to 500° Celsius for a duration of time sufficient to produce activated carbon, and removing the charcoal from the heat once the activated carbon is formed. The organic material can come from a wide variety of sources including coconut shells.

Advantages

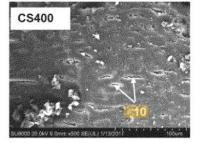
- Cost effective method of producing highly porous adsorbents using thermal oxygen activation
- A significant and unexpected improvement over commercial physical activation processes, which require inputs of carbon dioxide or steam, specialized reactors, high activation temperatures, and multiple hours of processing

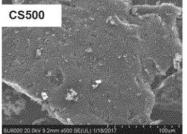




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