

Study of ash removal from activated carbon and its result on CO2 sorption capacity

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It is being observed that average temperature on Earth increases each year. This phenomenon can be explained by a theory known as a greenhouse effect. Thermal radiation, which is being emitted from the Earth's surface, is being absorbed by molecules in the atmosphere. Mainly, these molecules are methane, carbon dioxide and water vapor. The greater their concentration in the atmosphere, the more thermal radiation is being absorbed. To mitigate further intensification of the greenhouse effect by reducing CO<sub>2</sub> emissions, some technologies are being developed. They are known as a Carbon Capture and Storage (CCS). One of those technologies is post-combustion capture of CO<sub>2</sub> on solid sorbents, like activated carbon (AC). AC is a porous material with well developed specific surface area. It is obtained through carbonization of a precursor with predominating carbon element and next activation- physical, chemical or combined. Depending on precursor's source, the

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