

### Amination of mesoporous carbon and CO<sub>2</sub> adsorption characteristics of its aminated surface

장현태\*, Margandan Bhagiyalakshmi, Mari Vinoba<sup>1</sup>,

Mani Ganesh

한서대학교; <sup>1</sup>한국에너지기술연구원

(htjang@hanseo.ac.kr\*)

Ordered mesoporous carbon was synthesized by carbonization sulfuric-acid-treated silica/triblock copolymer/sucrose composites. Amino groups were introduced on the surface of mesoporous carbon by nitration followed by its subsequent reduction. The organic chemical reactions allowed us to introduce amino groups to the surface of activated carbon without affecting the physical structure of the adsorbent. Thus, obtained aminated carbon was characterized by XRD, BET, IR and elemental analysis techniques. CO<sub>2</sub> adsorptions study at 25 75 ° C shows a maximum CO<sub>2</sub> adsorption capacity of 50mg/g of sorbents.