

Effects of SO_x, NO_x gas adsorption properties of Lyocell based ACF

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High-performance SO_x, NO_x gas adsorption properties were prepared by inducing surface treatment of Lyocell-based activated carbon fiber. Carbon fibers were prepared from Lyocell fibers carried out at flame retardant treatment and heat treatment. The thermal behaviors of Lyocell fibers were also discussed on effects of both alkali metal and lewis acid. Chemical and physical activation of carbon fibers were carried out to control the pore structure. The surface modification of activated carbon fibers was conducted by surface treatments to improve the target gas adsorption on effect of introduced various functional groups. The mechanism of NO_x and SO_x gas adsorption was suggested that micro pore structure and introduced functional groups lead to the high adsorption properties.