

## Wet Impregnation of Non-Woven Fabric Include Activated Carbon Fiber and Adsorption Behavior of Nitrogen Oxides

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Impregnated Non-Woven Fabric (I-NWF) includes ACF prepared KOH activation at low temperature. I-NWF manufactured variable in KOH amounts, activation time and washing availability etc and confirmed selective adsorption conduct of NO<sub>x</sub> in fixed bed adsorption column. I-NWF occurred surface modification by chemical activation and that was increased adsorptivity with offers selective adsorptivity by KOH in NO<sub>x</sub> adsorption. When adsorbing NO<sub>2</sub>/Air to I-NWF, as the loading amount of impregnant increases and activation time lengthens, the removal efficiency relatively increases because KOH given more selective adsorption site for NO<sub>2</sub>. But, KOH of too much amount decreased the adsorptivity rather. It solved with the process to wash the KOH which blocking the surface pore.