

Preparation of metal impregnated porous nano carbon composites for adsorbing harmful gas

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The metal impregnated activated carbon has a problem that the metal is not stabilized on the surface, and thus the metal is easily desorbed. As a method for solving this problem, metal is bound by carbon nanofibers when using the chestnut-like carbon manufacturing method. The metal-impregnated porous carbon composites prepared by this study can increase the mesopores and increase the specific surface area. In addition to the pore adsorption of general activated carbon, the metal adsorption can proceed simultaneously with the chemical adsorption by the metal reaction. Positive contaminants can be removed. After catalytic gasification is performed on the activated carbon subjected to the metal impregnation process, a large amount of mesoporous inner pores are formed on the activated carbon, and carbon nanofibers are grown on the surface of the activated carbon by the CVD deposition method to impregnate the outer pores. The greenhouse gas removal efficiency of the metal - impregnated porous nano carbon composites was increased by more than 20%.