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Basic research on making high-perfbrmance activated carbon from cocoon

Akira KOJIMA[1)], Youichi KAMIISHI[2)], Yuuta KAWASHIMA[1)], Masao FUJISHIGE[1)] and Kouji SHIMIZU[3)]

1) Department of Chemistry and Material Science, Institute of Gunma National College of Technology
2) Science and Technology Promotion Division, Gunma Prefecture
3) Textile Research Institute of Gunma

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Abstract

Demands of activated carbon for adsorbing several kinds of gas, which influenced human life, are increasing. In this study, high-performance activated carbons from cocoon, wasted cocoon and inner thin film were investigated. Carbonization of cocoon was performed by using an electric furnace in nitrogen atmosphere at 400°C to 1,000°C, or a micro wave oven for 1 min to 5 min. Observation of external surface and color of carbonized cocoon, SEM observation and yield were examined. Efficiencies of deodorant efficiency for ammonia and formaldehyde were measured. Adsorption retentivity of carbonized cocoon was calculated, and the values of adsorption retentivity for ammonia and formaldehyde were 67% and 23%, respectively.

Keywords

Cocoon, Carbonization, Activated carbon, Micro wave, Deodorization

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