

## Cu(II) Removal of Activated Carbon Fibers Modified by GMA Grafting Polymerization

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In this work, the adsorption behaviors of activated carbon fibers (ACFs) containing the chelating functional groups were studied in the Cu(II) removal. The ACFs were modified by fluorination and glycidyl methacrylate (GMA) graft polymerization in order to induce chelating functional groups, such as iminodiacetate (IDA) groups on the ACF surfaces. FT-IR and XPS were used for the surface properties of the ACFs. N<sub>2</sub> adsorption isotherm characteristics were investigated by BET. In the results of FT-IR and XPS, the relative intensity of oxygen peaks was increased with increasing the fluorination time. The results were indicated that the radicals were increased by fluorination treatments, which led to the increase of IDA groups. Also, the specific surface area was decreased due to the pore blocking by IDA groups in spite of increasing of Cu(II) adsorption. This could be explained that the IDA groups of fluorinated ACF surfaces were generated by GMA graft polymerization.