

Crystallization process of carbon particle from phenol resin using supercritical fluid

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Phenol resin cannot be recycled because they have a insoluble/infusible characteristic with a three dimensional structure. we investigated the crystallizing method to phenol resin by using supercritical fluid.

By processing the phenol resin using supercritical fluid methods, the following results were obtained. The recycling of carbon is made possible by using supercritical fluid and 2-3 μm particles of carbon can be produced according to pressure and constant reaction temperature.

The carbon particles had the same chemical structure, crystal structure, and crystallinity as raw carbon. Following the increase of the reaction temperature, the crystal structure was confirmed to disappear, and could be used as amorphous carbon.